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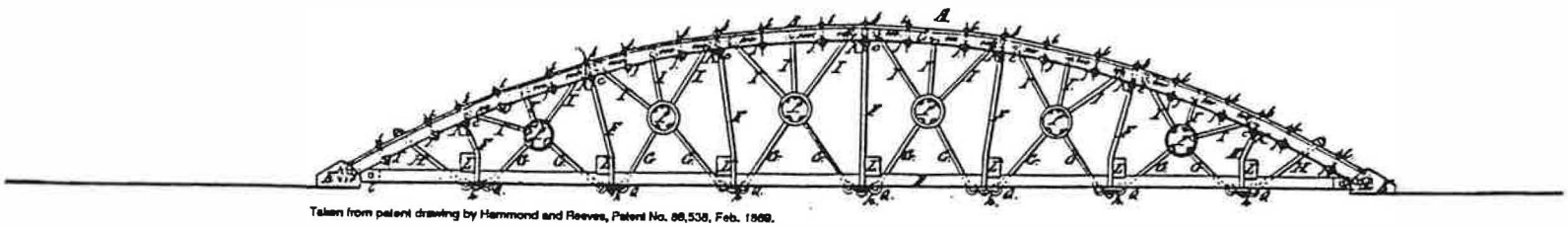

Taken from patent drawing by Hammond and Reeves, Patent No. 88,538, Feb. 1869.

NEBRASKA HISTORIC BRIDGE INVENTORY

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INTRODUCTION

Undertaken for the Nebraska Department of Roads with the cooperation of the Nebraska State Historic Preservation Office, this study presents a historical inventory and evaluation of vehicular bridges currently in use on the state, county and city road systems of Nebraska. It is intended to serve as a cultural resource management tool for both short- and long-term decision-making. By inventorying roadway bridges on a statewide basis, the study provides a data base and the contextual background by which individual structures may be evaluated for historical and technological significance. This will aid long-range policy and funding decisions at the outset of the planning process and allow enlightened review of proposed maintenance, rehabilitation and replacement projects. Additionally, it will help to guide mitigation measures for construction projects in the future which affect eligible structures. This study is directed to three specific objectives:

To inventory several types of vehicular bridges, giving descriptions of structural configuration and dimensions, present state of integrity and physical condition, location and ownership, with pertinent historical and engineering data.

To present a historical overview of bridge development and construction.

To assess all bridges in the inventory for relative significance and potential eligibility for the National Register of Historic Places (NRHP) based on historical and technological significance from a comprehensive viewpoint.

The study covers 743 bridges and grade separations, encompassing several structural types erected before 1947: concrete slab, concrete girder, concrete arch, timber stringer, steel stringer, steel girder, steel truss and steel arch. Generally not included are railroad bridges, bridges in private ownership and those that have been dismantled or permanently closed to vehicular traffic. There are exceptions, however, and several noteworthy vacated or privately owned bridges have been included.

The study is comprised of three components - inventory, synthesis and evaluation. The inventory began with a compilation of a master list of bridges taken from a computer listing of all state and local structures maintained by NDOR. The computer file contains data relating to location, ownership and structural capacity but does not contain historical information beyond date of construction. Using records from the computer and NDOR's structural inventory and appraisal, the list was assembled and individual structures evaluated preliminarily for significance by structural type and date of construction. Fieldwork involving archival research and on-site documentation has been conducted for each bridge considered potentially eligible for NRHP from the preliminary assessment. The research methodology involved collection of primary and secondary source material to determine construction dates, designers, fabricators, contractors and the circumstances around the bridges' construction. This research entailed the use of NDOR and SHPO archival and inventory material, biennial reports

of the State Engineer, *Nebraska Blue Print* and *Nebraska Monthly Highway Report*, records of the county boards of supervisors or commissioners, newspaper and magazine articles, original drawings, contracts, agreements and legislation, records from other government and archival sources and oral interviews. The information gathered from this research is presented in this report in the form of the Summary Listing later in this section and the HAER Inventory Cards in the section to follow.

The synthesis component of the study involves collection of information from primary and secondary sources to assemble an overview of bridge and transportation trends in Nebraska. The Overview relates many of Nebraska's important bridges to territorial and state bridge construction trends.

The final component is evaluation. Using the data compiled during the inventory, the bridges have been evaluated separately within the context of the overview and compared for relative historical and/or technological importance, using a numerical rating system developed for this inventory. Each bridge is categorized into one of three groups according to potential eligibility for NRHP. These findings will be presented to an Advisory Committee for review and comment and ratification of a final listing of National Register eligible structures. This determination of eligibility, followed by a thematic National Register nomination, culminates the bridge inventory.

OVERVIEW

I. Natural Challenges to Bridge Design

Waterways in abundance, unstable soil conditions, and dramatic extremes in weather combine to test the creativity of bridge builders in Nebraska. Two rivers serve as primary obstacles to overland travel: the mighty Missouri, which defines the state's eastern boundary, and the broad Platte, flowing easterly and bisecting the state north from south. The Niobrara and Republican Rivers, together with the Platte, are the state's principal drainage basins. These rivers, with dozens of tributaries large and small, have led some to assert that Nebraska has "more miles of surface streams than any other state" in the continental United States.[1] Waterways permeate every sector of Nebraska's varied topography, from the sand hills covering the state's northwest quarter to the Missouri River's alluvial plain. The character of these waterways is as varied as the bridges built to cross them. Bridge design requirements change in response to topography. A very different structure, for example, suits the Platte, which Mark Twain described as "a mile wide and an inch deep," than is appropriate for the deep canyon carved by the Niobrara. Innovative substructure design is necessary to support these diverse structures in areas where bedrock is difficult to reach, as is true in many areas of Nebraska.[2]

Nebraska's climate challenges every bridge in the state. Temperatures ranging from 30 degrees below zero to over 100 degrees Fahrenheit tax structural members and expansion joints. Precipitation also fluctuates: Omaha recorded 45.74 inches in 1881, but a mere 14.9 inches in 1934. Before construction of flood control projects, spring flooding and erratic summer rains frequently swept away bridges. According to a 1936 report, "records show that many river bridges have been reconstructed from three to six or more times." Some of this turnover was the result of structural upgrading, but much was because of high water damage.[3]

II. Early Trails, Early Bridges, Early Technology

Establishing trails and roads across Nebraska was crucial to the region's development. Initial settlement clung to the banks of the Missouri River, which featured regular steamboat traffic by 1831. Most waterways in the area, however, were too shallow and irregular for riverborne commerce.[4] If the area's vast interior was to be exploited, it would have to be done by land. Fortuitously, the Platte Valley became the link between the continent's well-established East Coast and the burgeoning West.

Although explorer Robert Stuart recognized the potential of the Platte Valley as a wagon route as early as 1813, it was not until 1830 that William Sublette directed the first wagon train along what was to become the Oregon Trail. Soon the California and Colorado gold rushes and the Mormon migration in the mid-nineteenth century lured hundreds of thousands to make the long journey. A contemporary observer, missionary Father De Smet, marveled that "these pioneers of civilization have formed the longest, broadest and most beautiful road in the whole world... No blade of grass springs up upon it so unceasingly is it trodden by the feet of thousands." Historian James C. Olson has created an apt metaphor for the area flooded by this stream of humanity: "The broad, flat valley of the Platte with its easy ascent to the foothills of the Rockies provided westward-moving Americans with one of the world's great natural highways, and the Platte Valley became the funnel through which America literally spilled over into the West."[5]

The Oregon Trail started at Independence, Missouri, cutting across Kansas to enter Nebraska near the southeast corner of present-day Jefferson County. From there it proceeded across Thayer, Nuckolls, Clay and Adams counties to the south bank of the Platte River opposite Kearney, turning west to ford the South Platte at Brule. The route then followed the south bank of the North Platte to Wyoming. Another trail, known as the California Trail, went west from Council Bluffs/Omaha, paralleling the north bank of the Platte and North Platte. Yet another early trail connected Nebraska City to Fort Kearney. The discovery of gold in the Black Hills in 1874 stimulated the development of a trail heading northwest from Sidney, then the terminus of the Union Pacific Railroad.[6]

Initiated by private citizens and business interests, these nascent roads were often far from the shortest distance between two points. Tracks were rutted, and bridges were rare. Freighting companies grew frustrated by low-quality and inefficient routes, and felt significant financial incentive to promote improvements. Alexander Majors, partner in a firm which dominated military freight hauling by the 1850s, needed a better route from a terminal in Nebraska City to Ft. Kearney. In 1860 he hired August Harvey, a civil engineer, to survey and establish a direct road to replace the existing, roundabout trail. A note on Harvey's 1862 map outlining the new route proudly announced: "This road worked and opened in 1861 - every stream bridged -no fords - no ferries."[7]

The federal government focussed its initial road-building efforts on the east side of the Missouri River. In 1820, Congress authorized construction of a military road from Grand River, Missouri, to Council Bluffs. U.S. troops under the direction of General Atkinson built the 300-mile stretch. It was not until 1855, the year after the west side was opened for settlement, that Congress approved a road from Omaha to Fort Kearney, which presumably upgraded the earlier pioneer trail. The 168-mile road was built by the Engineer Department between 1855 and 1861 at a cost of $49,993.37. U.S. Highway 30 now follows the same general route. Shortly thereafter, the federal government authorized a road from Fort Riley, Kansas, to Fort Kearney along the Republican River, and from Niobrara to Virginia City, Montana.[8]

Since Congress could not keep up with the task of extending roads to the rapidly developing frontier, it encouraged settlers to make improvements themselves. The legislation creating Nebraska Territory in 1854 granted county commissioners both the authority and responsibility for opening and maintaining county roads: "All public

roads shall be surveyed, opened, made passible [sic] and kept in repair, 40' wide; and all bridges on any public road shall be at least 16' wide, with a good and sufficient railing on each side, 3' high, the whole length of the bridge." Six years later, the roadway width was increased to four rods (66 feet). To fund road construction, a poll tax was authorized for men 21 to 60 years of age, with the provision that two days of labor could be substituted for cash payment. The territory's first legislature, which convened in 1855, established ten territorial roads and incorporated a number of bridge and ferry companies.[9]

Little is known about actual bridge construction practices of the territorial era. No bridges survive from this period, and even documentary evidence is rare. It seems fairly certain, however, that the legislature's initial dictates about bridge width and railing height were largely ignored, since state authorities were struggling to implement similar measures fifty years later. In all probability, territorial bridges in Nebraska resembled structures being built in other newly settled regions of the Midwest: for little traveled crossings, simple timber stringers; for more important locations, standard truss types of wood and iron, known as "combination bridges" because of their mix of materials. As was common in cash-poor areas, Nebraska settlers preferred to repeatedly reconstruct inexpensive timber bridges rather than invest in more permanent - but expensive - metal and masonry structures. The ultimate example of cheap (and presumably short-lived) bridges were those crafted by resourceful prairie pioneers from a readily available material: sod.[10]

As Nebraska's population grew, pressure mounted to erect bridges at larger waterways crossed by ford or ferry. In 1871, four years after Nebraska achieved statehood, the legislature created a bridge fund to pay interest on bonds issued by counties to build bridges over the Platte. The fund was financed by the sale of fifty sections of government land. John L. Means of Grand Island, credited by early 20th-century engineer Guy Dorsey as "probably the greatest of all early big stream bridge builders" in the state, was responsible for most of the early Platte bridges, including "a high truss combination span at Ashland, under-truss spans at Schuyler, Central City, Columbus and 'Twelve Bridges' at Grand Island, so-called because it required twelve individual bridges to span the channels and islands at that crossing." The bridge at Grand Island, erected in 1878, may have been the 4,200-foot-long, 10-foot-wide structure that served traffic until replaced by a state aid bridge in 1919. The Central City structure, probably of a similar age and stretching 5,080 feet, also stood until 1919. The longevity of these bridges was unusual, given the waterway's periodic rampages. Ice jams and floods in 1881, for example, annihilated every bridge on the Platte below the mouth of the Loup, and left only a few survivors upstream.[11]

As in road development, private interests often were the moving force behind bridge construction. An example is the North Platte bridge on the Sidney/Black Hills Trail built in 1876 by Henry T. Clark, with financial assistance from the Union Pacific Railroad and investors in Omaha. The value of this improvement is apparent from a freight driver's recollections of the earlier ford:

> **A sight worth seeing and well remembered was that of three full ox-teams of seven yoke in each team - 21 yoke in all - stretched out across the North Platte River on the old Sidney Trail, attached to [a] single wagon loaded with supplies, hauling it through the stream in flood with a bottom of treacherous quick sand.**

Relying on the venerable kingpost-truss form, much used by mid-nineteenth century bridge builders, Clark's combination bridge was a series of wooden "A" frames with iron-rod hangers. It was apparently of sturdy construction: one writer recalls that "the trusses of this bridge were in good condition after ten years of the Black Hills traffic and twenty-three years of service." If sections were torn away by ice or floods, they could be easily replaced. The second bridge over the North Platte was built at Chimney Rock in 1892 by Robert Z. Drake, who bought out John Means' bridge business in 1902 and established the Standard Bridge Company, one of the most important bridge building firms in Nebraska history. Another pair of major bridges was built by John Burke, who settled in Lincoln County in 1864 and was one of the first in Nebraska to experiment with irrigation. He built a bridge across the mouth of the South Platte and, later, bridged the Platte to expedite movement of freight from the Union Pacific Railroad station on the north bank to Fort McPherson on the south. None of the nineteenth-century Platte River bridges have survived.[12]

III. From Wood to Steel: Development of Design and Materials in the 19th Century

The gargantuan bridges over the Platte and its forks displayed typical engineering practices of the day. Combination spans were also used on more modest bridges over smaller streams. Dorsey, writing in 1931, reports that "the earliest combination wood bridge of which we find record in Nebraska is a 40 ft. narrow Howe truss on stone abutments on the Iron Bluff and Omaha Road in Douglas County - erected October, 1867."[13]

Patented by William Howe of Massachusetts in 1840, the Howe truss featured wooden diagonals in compression and iron verticals in tension. Another important truss design, patented by Thomas and Caleb Pratt in 1844, reversed the stress pattern of the Howe, making verticals stand in compression with diagonals in tension. Although originally made of wood and iron, this design adapted well to steel construction. Because of its simplicity and adaptability, through and pony Pratts quickly became ubiquitous throughout most parts of the United States. In Nebraska, the Pratt and various modified designs rode a wave of popularity well into the 20th century. Nebraska proponents of the Pratt resisted its replacement by the Warren truss, another mid-nineteenth-century invention. Patented by English engineer James C. Warren in 1848, the Warren truss is characterized by diagonal members in both compression and tension. By the early 20th century, the steel Warren truss dominated bridge construction in many areas of the United States, but it never swept Nebraska. At least two of Nebraska's surviving examples (**SALI20** and **SAUN21**) were, in fact, moved in from nearby states. Apart from indigenous concentrations of Warren pony trusses in Gage and Custer counties, this type is relatively rare in Nebraska.[14]

Evolution of truss components and connections paralleled that of truss design. Pins were first used to connect metal truss members on a Lehigh Valley Railroad bridge in 1859. Two years later, a complementary truss member, the wide, forged, iron eye-bar, was introduced. Eye-bars of steel appeared in the 1870s. Pin connections, typically used on Pratt trusses, allowed quick erection, but were a weak point

structurally and could loosen from vibrations caused by traffic and wind. Riveting created a stronger, sturdier means of connection, but was not practical in the field before portable pneumatic riveting systems became available in the late 1880s. This technological breakthrough boosted the popularity of Warren trusses, which were usually of riveted construction. Some early 20th-century Pratt trusses took advantage of riveting as well.[15]

Although Pratt and Warren trusses were the most common metal bridge types in the late nineteenth century, a number of other styles appeared in Nebraska during the period. Historian Dorsey identifies the state's first all iron bridges as a 100-foot bowstring arch in Tecumseh over the Nemaha, and a similar structure in Otoe County, both erected in 1869 on a road between Nebraska City and Beatrice. The Tecumseh bridge was replaced by a through truss in 1892, and the Otoe County bowstring was moved in 1926 to a new site seven miles south and one-and-one-half miles east of Nebraska City. Neither has survived, but Otoe County has three bowstring arches (OTOE18, OTOE27 and OTOE28) that date to 1874, 1876 and 1878, and Beatrice has a bowstring that apparently dates from the early 1870s and originally stood at Blue Springs. A bowstring arch bridge was shaped as its name implies: a curved upper chord was tied at each end to the lower chord. The design was patented in 1841 by Squire Whipple, an influential mid-nineteenth-century engineer who published the first major American treatise on truss bridges six years later.[16]

The mobility of metal trusses is an important trait. Nebraska civil engineer Jack Singleton, writing in 1931, noted that "tin" bridges were often "removed from their original sites to make way for newer, heavier, more modern structures, and have been re-erected at other locations where they may continue in service." Movement of a structure such as the Blue Springs/Beatrice bowstring, thus, does not necessarily detract from the historic integrity of a truss bridge.[17]

Relocation was not possible with leg bridges and bedstead trusses, simple spans widely used around the turn of the century. Leg bridges spanned less than 30 feet; bedsteads were typically 30 to 60 feet. As described in a 1902 article entitled "Defective Bridge Construction in the Prairie States," leg bridges were:

> **steel girders, usually I-beams, spanning the opening and supported at each end by uprights or legs of steel I-beams with riveted or bolted connections to the girders and resting upon timber mud sills embedded three or four feet beneath the bed of the stream. A backing of wooden plank, sheet steel, or flagstone, rests against these legs, and supports the earth filling of the roadway.**

Bedsteads featured pony trusses in which "the end post of the truss is extended downwards to form the leg support as in the leg bridge, and is securely riveted to the end of the upper chord member." Designed without provision for expansion and contraction, bedstead structures quickly weakened, making them prone to buckle under the simple pressure of earth fill. Others collapsed because of corrosion. The article's author claimed that the style appealed primarily to short-sighted penny-pinchers who thought: "Let the next generation care for its own bridges."[18]

Remarkably, at least a dozen bedstead bridges have survived into the 1990s in Nebraska. Not so surprisingly, however, most are in very poor condition. Both Pratt and Warren trusses were used. Connections are usually pinned, but some are riveted.

Spans range from 35 to 79 feet. The longest (THUR09) is about 20 feet beyond the normal maximum for this style and, also atypically, employs transverse stringers. It was probably built by the Standard Bridge Company, owned by Robert Z. Drake, who claimed to have invented the transverse joist girder bridge. The construction dates of only three bedsteads can be verified: a three-panel Pratt in Butler County built by the Canton Bridge Company in 1897 (BUTL04), another Pratt in Cherry County built by the Wrought Iron Bridge Company in 1900 (CHER02) and a Warren bedstead in Lancaster County (LANC11) from 1897, also by WIBCo.[19]

Despite their shortcomings, bedsteads were built, in part, because of the simplicity of their footings. The task of establishing solid bridge foundations was formidable, given the depth of Nebraska's bedrock. Spring ice flows and floods further tested substructures. Early bridge builders preferred to make foundations from red cedar and oak piles, which were strong and relatively resistant to deterioration in water and air, but scarcity sometimes forced them to use any timber available. Although the initiation of rail transport brought access to wood from other markets, such as Southern pine and Western fir, even the best timber substructures remained vulnerable to decay until the widespread adoption of creosote oil as a wood preservative in the early 20th century. No one questioned the durability of masonry substructures, but, for the most part, only large cities and railroads could afford them. Since piers were costly and hard to erect, early Nebraska bridge builders often avoided their use by opting for longer superstructures.[20]

Bedstead bridges were an effort, albeit a structurally flawed one, to use metal for footings. Steel tubes had also been tried, but were felt to be unsafe. Around 1902, however, Robert Z. Drake revolutionized the industry by fabricating a steel pile from two eight-inch channels and a five-inch beam. Within the next decade, I-beam footings and, later, eight-inch H-beam footings became ubiquitous. An engineer in the mid-1930s, reflecting on past years of bridge construction, wrote that "it is interesting to note... that the super-structural styles have undergone an almost complete revolution, while the sub-structural style or type is fundamentally unchanged." Another engineer at about the same time reported the accomplishments of Drake, owner of the Standard Bridge Company: "In the country between the Mississippi River and the Great Divide he alone has erected over 15,000 steel pile structures."[21]

It is evident, then, that the last half of the 19th century and the first decade of the 20th century witnessed the evolution of both superstructures and substructures from wood and iron to steel. The first significant use of steel in bridge construction in the United States, the 1874 Eads Bridge across the Mississippi in St. Louis, was perhaps familiar to many in the young state of Nebraska. The first major bridge entirely of steel was also nearby, the Chicago and Alton Railway's Glasgow Bridge, built over the Missouri downstream from Nebraska in 1879. By the end of the century, steel had surpassed all other materials for bridge construction in the United States.[22]

Steel had been available since the early 1800s, but its manufacture was laborious and expensive. Iron was more economical, and was produced on a large scale. Even though the country's annual iron output climbed to almost one million tons by 1860, that amount was not nearly enough to satiate the demands of railroads, manufacturers, the construction industry, and bridge builders. The Civil War intensified the need for faster and better ways to work iron and, fortuitously, at about that time there were

major breakthroughs in converting iron to steel. The first to be utilized on a large scale was the Bessemer process, which required a pear-shaped furnace into which molten pig iron was poured and blasted by air to remove impurities, emerging as molten steel. Bridge engineer and author, J.A.L. Waddell, noted that "Bessemer steel was never popular for bridgework on account of its lack of reliability, and especially because of its occasional tendency to crack under shop manipulation."

Although Bessemer steel was sometimes used in bridge construction, wrought iron continued to dominate the market until 1880. Both materials were almost completely replaced in the following decade, however, by steel produced by the "open hearth" method. This process, which utilized scrap as well as pig iron, surpassed Bessemer steel by creating a product of higher quality and lower cost. In the meantime, new iron deposits were discovered and mined using innovative techniques to extract the ore and transport it to the mills. By the 1870s, high-grade fuel was provided by commercial production of coke, which burned hotter than its source material, coal, and was more readily available than charcoal. The manufacture of steel in the United States boomed from about 22,000 tons in 1867 to 11.4 million tons in 1900, with the country taking world leadership in production in 1889.[23]

Steel ingots were hammered at a forge, flattened by rolling mills, or recast by a foundry into standard shapes, such as I-beams, angles, channels, and plates, for use in the construction industry. These provided the building blocks for both steel-framed buildings and metal bridges.

IV. Nebraska's Late 19th and Early 20th Century Bridges and Their Builders

Builders of the Platte bridges appear to have been local, with designs created by improvisation. Smaller bridges, on the other hand, were usually the product of established bridge companies which bid on construction contracts let by counties. Several companies in the Northeast and Midwest specialized in bridge fabrication. Their salesmen contacted counties where rapid population growth produced a demand for large numbers of bridges. When an order for a bridge was received, necessary components were prepared at the fabrication plant. Bridge fabricators sometimes erected the parts at the site as well. Other firms, particularly local ones, received county bridge contracts but were responsible for erection only, obtaining bridges from the fabricators.

Nationally prominent companies which worked in Nebraska included the King Bridge Company, maker of the bowstring trusses described above as well as another bowstring in Pawnee County (PAWN17), another bowstring in Antelope County (ANTE08), a Warren through truss in Butler County (built in 1891, BUTL01) and a handful of other iron and steel spans. King's headquarters in were in Cleveland. For a short time, the company had outposts in Topeka and Iola, Kansas. Other Ohio firms visible in early Nebraska were the Wrought Iron Bridge Company, which had district offices in New York, Chicago, and Kansas City and built the Olive Branch Bridge in Lancaster County

(LANC11) in 1897 and the Twin Bridge in Cherry County (CHER03) in 1900, and the Canton Bridge Company, responsible for a clusters of bridges that survive in Pierce, Valley and Cherry counties.[24]

In 1900, J.P. Morgan created the American Bridge Company by consolidating 24 smaller firms, including the Edge Moor Bridge Works (Wilmington, Delaware), the Gillette-Herzog Manufacturing Company (Minneapolis, Minnesota), the Milwaukee Bridge and Iron Works (Milwaukee, Wisconsin), and the Union Bridge Company (New York, New York), all of which had worked in Nebraska. The American Bridge Company subsequently erected many bridges across the state, including a swing span at Omaha in 1903, the Meridian Bridge at Yankton (CEDA23) in the early 1920s, and the Hastings Subway (ADAM05) in 1934.[25]

Regional bridge builders active in Nebraska included J.B. Marsh, George E. King, and Nathaniel Stark, all of Des Moines; the Minneapolis Steel and Machinery Company; J.W. Hoover, O.M. Blodgett, and the Kansas City Bridge Company, from Kansas City; and the Missouri Valley Bridge and Iron Works of Ft. Leavenworth. In addition, there were many bridge erectors located in Nebraska. Some obtained materials from Eastern firms. Locally, iron and steel were available from several companies including the Paxton-Vierling Iron Works, established in 1885 as Omaha's first metal works. Most local bridge builders were small contractors who worked in neighboring counties. Some had gained experience as agents for established Eastern firms. The Andrews Brothers, for example, appear in the Omaha City Directory in 1890 and several years thereafter as general agents for the Smith Bridge Company of Toledo, Ohio. In 1894, however, Smith is not represented, but there is a new firm on the scene: the Andrews Bridge Company. Others entered the business through family connections. Harvey Ward's family was involved with the Clinton Bridge and Iron Works, a major Iowa company, for which Harvey was an agent before going into business under his own name. He built bridges in several southeastern Nebraska counties in the late 19th and early 20th centuries, including a through truss in 1892 that replaced the bowstring arch across the Nemaha. He married Mary A. Gilligan, who was probably related to John B. Gilligan, a bridge builder from Falls City.[26]

Some eventually regretted their entry into the field. The Lincoln Construction Company erected state aid bridges at Cambridge and Sutherland in 1914 and several bridges in Clay County in 1915-16. One of the latter was inspected by an engineer from the state who found that "the workmanship as a whole was decidedly poor... I would recommend that all of the payments on the bridge be held up until the poor appearance... is remedied." In frustration, the company's president, W.S. Collett, declared that "my experience in the bridge business has been more or less disastrous, from a financial point... which leads me to the conclusion that I had better quit while my credit remains good."[27]

Others did quite well. Plaques of the Standard Bridge Company, Omaha Structural Steel Works, and the Western Bridge Company, all based in Omaha, can still be seen on bridges throughout Nebraska and in surrounding states as well. Standard, as mentioned earlier, was founded by Robert Zale Drake, who is credited with innovating designs for the transverse joist girder bridge and steel pile substructures. John W. Towle, after working for an agent of Canton Bridge in the late 1890s, established the Western Bridge and Construction Company. While apparently maintaining some

involvement with Western, he started up a competing company, Omaha Structural Steel Works, in 1906. A decade later, the steel works covered an eight-acre site and employed over 300. Towle was also instrumental in creating Allied Contractors in 1919-20, a firm which seems for a time to have taken over construction responsibilities from Omaha Structural Steel.[28]

Many Nebraska counties began contracting for bridges on an as needed basis, but most eventually let annual contracts to a single company for construction and repair services. Representatives from national and regional bridge companies, as well as local contractors, submitted sealed bids based on needs indicated by the counties. County specifications tended to be vague, often stating little more than the location and length of a proposed bridge and, sometimes, the desired material (timber, iron, combination, or steel) or several options. This lackadaisical approach was common throughout the country: as early as 1874, an Ohio wrought iron bridge fabricator complained that the "loose manner" of advertising and awarding contracts did not make for fair competition because:

> each builder would adopt his own standard of load and unit strain, which usually differed from that of his competition, while others had no definite standards, but adopted the 'rule of thumb' practice, so that the bids were no guide whatever to the relative cheapness of the respective bridges, as the bidder who was twenty-five per cent below his competitor in price, may have been fully fifty per cent below him in capacity and weight of iron used, and hence was really the highest bidder in fact.[29]

The state engineer encouraged counties to adopt their own plans, designed by competent engineers, but only a few heeded the advice:

> A few of the counties had their county engineers or surveyors prepare plans upon which to let contracts to build bridges, but in a large majority of the counties the bridge companies furnished plans and specifications for bridges and the company whose plans and specifications were finally adopted by the county were given an unjust advantage over other competitors for the reason that these plans which were put on file were not fully detailed and did not specify clearly and positively the sizes and kinds of material and the method of construction.[30]

Despite this lack of standardization, most of the trusses produced during this period are quite similar: lightweight, pin-connected spans, usually half-hip or full Pratts. There are a few noteworthy exceptions, such as group of late 19th and early 20th century bridges in Gage County. Thirty-two of Gage's Warren pony trusses survive, unusual not only for their rejection of the popular Pratt style but also because they combined both pinned and riveted connections. They were also extremely short, most under thirty-five feet, a situation where stringer spans or half-hip pony trusses were more commonly used. Several firms, including the Youngstown Bridge Company, J.H. Sparks, and Standard, received contracts during the period that these bridges were built, so the unusual plan evidently did not deter competition.

Even when counties used standardized and well-detailed plans provided by the state, there was no guarantee that the product would be superior. Clay County, for example, adopted state plans in 1910. In the following year, despite some debate over the merits of steel trusses, the commissioners ordered three pony truss bridges from a previous vendor, the Western Bridge and Construction Company. There was apparently

some doubt about the quality of the construction, because the commissioners asked the state engineer to examine the completed bridges early in 1912. The engineer confirmed their fears, finding that the workmanship was poor and that none of the bridges had been built according to specification. In examining one bridge he discovered that looped eye-bars had been substituted for punched eye-bars for the lower chord; the angle sections used for verticals and sway bracing were one-sixteenth of an inch too thin; three-inch by twelve-inch stringers were used instead of the four- by sixteen-inch members specified; and bolted field connections were badly done. In fact, he concluded, "as the bridge stands, it is unsafe for a twenty-ton-traction engine, and I should hesitate about taking a twelve ton engine across after the bridge has been in service for three or four years." Shortly thereafter, Western rebuilt the bridge to meet the state engineer's approval. The Big Blue River Bridge (CLAY07) still carries traffic one mile east of Harvard.[31]

Another force working against the construction of low cost, high quality bridges was collusion amongst the bridge builders, which has been well documented in neighboring states. Agents for bridge companies met before annual spring contract lettings and split up the territory. Companies not designated to receive the contract in a given county would bid somewhat higher than the anointed company, and the county commissioners would innocently award the contract to the lowest bidder, not realizing that the outcome was predestined. Indeed at other times, the commissioners' decision was not so innocent.[32]

There is evidence of collusion in Nebraska as well. Commissioners in Richardson County, who had been doing business for a number of years with the John B. Gilligan Bridge Company of Falls City, rebelled in 1906. The Bridge Committee exclaimed that "the bidders who were supposed to be competitors of the John Gilligan Bridge Co. were mere stool-pigeons imported here for no other purpose than to drag the game into the net." For some years thereafter, the county itself took over responsibility for bridge construction. One of its 1912 projects was Grunzenhauser's Bridge (RICH07), which still spans Fourmile Creek about seven miles south of Humboldt.[33] York County had similar doubts about the competitiveness of its bidders when it awarded its annual bridge contract in 1916 the the Western Bridge and Construction Company. Fearing that they were paying more for comparable structures than was neighboring Hall County, the supervisors sought advice from the state engineer. It was only after the state engineer told them that their prices compared favorably with other counties' that the supervisors awarded a contract to Western.[34]

The bridge cabal apparently schemed to extend price fixing to the state level, too. The Nebraska Board of Irrigation's 1910-12 *Biennial Report* revealed that competition seemed genuine for all of the State Aid bridge contracts "with the exception of the first-attempted bridge letting at Springview, Keya Paha County, where the bids seemed to indicate previous agreement between the bridge companies represented." Detected but not defeated, the companies apparently made another attempt when the Carns State Aid bridge went out for bid: "From the bids received it was evident that there had been no competition in the bidding and the bids were all rejected."[35]

Supervision of construction and subsequent maintenance was also haphazard for both roads and bridges, especially when it was the responsibility of townships. As late as 1912, the state engineer complained:

At present the major portion of the money which is paid out upon the roads is expended under the supervision of road overseers. These road overseers are almost invariably men who have little or no knowledge of the proper methods of road construction and who are elected by the voters of their township without any regard to their qualifications.[36]

While bridge design and construction practices were, for the most part, similar from county to county, Omaha was quite unique. A.S. Morgan was hired as the city's first engineer in 1855. One of the most influential men to hold that position in the late 19th century was Andrew Rosewater, who started his career as a rodman on a crew exploring potential transcontinental rail routes through the Rocky Mountains. He was hired as Omaha's assistant city engineer in 1868, and, after a short stint as Douglas County surveyor, became Omaha's chief engineer in 1870, a position he held at various times until his death in 1909. In addition to developing the city's water and sewer system, Rosewater spent a good deal of energy dealing with ways to separate rail and other traffic. By 1892, the city had four major viaducts at Tenth, Eleventh, Sixteenth, and Park streets, with construction of another planned at Hamilton. According to provisions in the city charter, the city could order railroads to build viaducts over their tracks. Railroads often objected to the expense, and procrastinated on construction. Such was the case, for example, in the 1890s when a new structure was needed to replace the earlier Sixteenth Street Viaduct. After long haggling with the railroads over repairs on the old structure and armed with the railroads' grudging consent to build a new viaduct, the city council in May 1899 resolved that "unless the U.P. and B & M Ry. Cos. do file with the City Engineer complete plans for the new 16th St. viaduct, as agreed upon by said R.R. Companies and the City Engineer, together with the agreement to build the same without any delay... the City Attorney be and is hereby directed to begin legal proceedings" against the railroads. Apparently, the strong-arm tactics worked: about a year later, the new viaduct (DOUG18) opened. The city also paid for some viaducts, and the city engineer often drew up plans and specifications, even if railroads were responsible for construction.[37]

Omaha impressed not only Nebraska but other states along the Missouri River when it became the site of the first permanent bridge across that waterway in 1872 - although the Union Pacific, not the city, was responsible for its construction. In 1887-88, the Council Bluffs and Omaha Railway and Bridge Company erected a bridge for streetcar and other vehicular traffic, an iron truss structure which, with approaches, measured nearly a mile. The "electric motor line" offered "great advantages for rapid transit between the two cities... the trip, seven miles, being made in twenty-nine minutes."[38]

In 1893, the Omaha Bridge and Terminal Railway Company built a 1,620-foot long interstate bridge, designed by J.A.L. Waddell and fabricated and erected by the Phoenix Bridge Company of Pennsylvania. The central, 520-foot swing span was designed to carry two rail tracks between the truss webs, with two lanes for use by electric streetcars and other vehicles and two sidewalks cantilevered outside. A contemporary writing in *Engineering News* declared that the central span "is the largest and with one exception the heaviest swing span in the world," weighing in at about 3,000,000 pounds. The other spans were intended to be temporary and carried a single track, with provision for vehicular and pedestrian traffic. In 1903, the temporary construction was replaced by another swing span. Although only separated by a decade, the two spans reflect major changes occurring in bridge construction at this

time. While all castings on the earlier swing span were iron, all on the new span were steel. Bracing was more rigid in the new span, and structural members heavier, to support a greater live load. Waddell again designed the structure; the American Bridge Company, built the superstructure. Waddell also designed another swing span further upstream at Sioux City, Iowa, in 1896-97. Built by the private efforts of the Combination Bridge Company, the bridge cost about $1.2 million and included two 500-foot, fixed, through trusses and two 470-foot swing spans. It carried two traffic lanes and a rail track.[39]

The state's road system, however, was becoming too important too leave in the hands of private interests. As cars, trucks, and farm machinery grew in number and weight, the demand for good quality roads and bridges became more and more pressing. As engineers became more professional, they insisted that related industries keep pace. For example, Waddell wrote in 1915:

> **It became evident that while the old competitive system of lump-sum bids by the various bridge companies on their own plans had played its part in developing economic design in America, for best practice it had become a thing of the past. As [the noted engineer] C.C. Schneider has stated: "The manufacturer should confine himself to his legitimate field of manufacturing steel at so much a pound."[40]**

State government, ready or not, was faced with coordinating the efforts of local governments, private groups, and, soon, the federal government, to develop a transportation system that would bring Nebraska from horse-and-buggy days into the gasoline-powered 20th century.

V. The Influence of the Railroads

Railroads catalyzed the settlement of the West, which led to burgeoning demand for roads and bridges in the last half of the 19th century. Railroad engineers pioneered the use of new materials, developed bridge designs, and upgraded construction standards. These innovations were soon borrowed by highway bridge builders. Indeed, many bridge engineers who honed their skills in the service of railroad companies established private engineering practices and became consultants to highway departments. To understand this period of highway bridge development, therefore, it is necessary to examine the contribution of the railroads.

The stimulus to create Nebraska Territory came, in large part, from politicians and businessmen in Iowa, Illinois, and points east who wanted the privilege - and the concomitant economic benefits - of having the transcontinental railroad go through their states. Over a decade of squabbling by proponents of the various proposed routes ended in December 1863, when President Lincoln determined that the eastern terminus of the Union Pacific Railroad would be at Council Bluffs. Progress was slow at first - only forty miles were completed through 1865 - but the track passed Kearney by the following August and North Platte by November. A year later, it reached Cheyenne. The final spike connecting the country by rail was driven in Utah in May 1869.[41]

The advent of cross-country rail travel led to the gradual extinction of slower, and often less comfortable, means of transit, including the stagecoach, wagon train, and steamboat. The grand, seemingly endless pioneer trails across the prairie were abandoned by all but local residents. The most important roads were those radiating out to farmlands from new towns founded and ambitiously promoted by the railroads. George Johnson, an early Nebraska state engineer, remarked that "as soon as the great railroad development was started in the State, people lost interest in road construction." The state did not participate in road construction from 1876 until 1911.[42]

It thus comes as no surprise that railroads claim credit for nearly all innovation in bridge design and construction in the late 19th century. From their inception, railroads needed reliable bridges to protect their investment in rolling stock and to keep schedules running smoothly. Bridge engineer Waddell asserted that "the introduction of railroads in the United States came in 1829, and with it began the real development of bridge engineering." Another engineer, Jack Singleton, observed that "the railroads are usually first in developing a country and they learn from experience the peculiarities and eccentricities of a stream."[43]

The Missouri River qualified as one of the most eccentric waterways in the country, and the Union Pacific was the first to conquer it, initially with a temporary timber structure at Omaha in 1870 and then, two years later, with a permanent, single-track, iron truss railroad bridge. The difficulty in accomplishing this feat is reflected in the structure's $2.9 million price tag, a truly gargantuan sum in that era. According to a late 19th century description in *Engineering Record*, the bridge "consisted of eleven spans of 250 feet each... The late T.E. Sickels, M. Am. Soc. C. E., was chief engineer. The original superstructure was of the Post pattern for a single track, with trusses 28 feet deep, divided into 22 panels; the web was of the triple-intersection system." The article cited the bridge as "the most prominent example in America of the Post superstructure and pneumatic cylinder piers."[44]

The first Post truss bridge was built for the Erie Railroad in 1865 and the style was in vogue for the next fifteen years. Designed by S. S. Post, it was essentially a Pratt truss in which the verticals inclined towards the center. "Triple intersection" indicates that diagonals stretched over three panels, rather than just a single panel as in typical Pratt trusses. Proponents of the Post style asserted that it offered an extremely rigid and sturdy structure, but that claim was quickly disputed by the Omaha bridge. The structure had no horizontal bracing on the top or bottom of the trusses or at the portals and, not surprisingly, two of the bridge's eastern spans were blown down in a storm within a few years of its completion. As historian Carl Condit observed: "This remarkable exhibition of daring and ineptitude was as noteworthy for its short life as for its great size and unusual construction."[45]

One span of the Omaha bridge was replaced by a trestle, the other by another modified Pratt known as a double-intersection truss, in which diagonals crossed two panels. Double-intersection trusses are often called Whipple trusses after Squire Whipple, who first developed the design for the Saratoga and Rensselaer Railroad near Troy, New York, in 1852, and who was also responsible for the first bowstring arch truss. A 19th century engineering journal described the advantages of the design:

In the case of trusses of comparatively small span, this double system of bracing has the advantage of making a more rigid girder, and one better calculated to withstand the racking effects of a live load, whilst in the case of large spans, the joints are less clumsy, and the lateral bracing can be more satisfactorily planned.[46]

The "pneumatic cylinder piers" of the Omaha bridge were also significant. Condit describes them in more detail: "Each pier of the bridge was made up of a pair of cast-iron drums filled with concrete, a crude but useful innovation that constituted an early step in the development of the concrete bent." Some of these piers were recycled in 1885 when the volume of traffic and heavier loads prompted the railroad to initiate construction of a new bridge at the same site. This new structure not only included two tracks, but also "a highway and a sidewalk,respectively 7 feet and 3 feet wide in the clear... carried on cantilever arms projecting outside each line of trusses." The cantilevered sections were later removed. The new superstructure, manufactured by the Union Bridge Company at its plant in Athens, Pennsylvania, consisted of four pin-connected, 246-foot, Whipple double-intersection through trusses with three 125-foot approach spans at each end. This bridge, in turn, was replaced in 1916.[47]

Waddell remembered George S. Morison as being the last prominent American engineer to use the Whipple truss. Thanks to the efforts of Morison, these trusses were soon a relatively common sight over the Missouri. In the late 1880s, he employed them at Blair when retained by the Missouri Valley and Blair Railway and Bridge Company, and again when engineering bridges for the Chicago, Burlington and Quincy Railroad Company at Rulo and Nebraska City. The superstructure of the Rulo bridge, fabricated by the Edge Moor Iron Company, included three 15-panel, 375-foot Whipple through trusses created from steel, cast iron and wrought iron components.[48]

The age of steel in bridge construction was just dawning during this period, and the inexperience of some producers apparently necessitated special caution on the part of bridge builders. Morison's specifications for the Rulo bridge noted that "steel may be made by the open-hearth or by the Bessemer process, but no steel shall be made at works which have not been in successful operation for at least one year." Indeed, even specifications and basic quality control were innovations of this period. Waddell credits Morison's specifications for a bridge for the Erie Railroad, prepared in 1873, as "probably the first printed bridge specifications ever adopted by any American railroad." He added that Morison "required successful bidders to submit stress sheets and plans for approval before starting work, and later began the inspection of materials and workmanship."[49]

Railroads led the way in adopting steel as the material of choice for bridge construction, and devised new designs to take advantage of the material's potential. Railroads also pioneered the use of concrete for bridge piers, as at the Union Pacific crossing at Omaha, and also at a Burlington Railroad span over Pawnee Creek near Ashland, where barrels of Portland cement were imported from Belgium in 1888. In addition, around the turn of the century railroad companies experimented with floor surfaces, such as creosoted wood, and the results were soon transferred to highway bridges as well.[50]

An engineer writing in 1929 proclaimed: "There is no doubt that twenty years ago the science and art of bridge design had found their highest expression in railway

bridges. Specifications were more adequate, inspection more rigid... than in the highway field." But an upstart, in the form of the unpretentious Model T, would ultimately return roads to the spotlight. The rising dominance of the automobile industry over railroads is figuratively expressed by the caption on a 1924 photo of a new road: "A speedway over which the over-ambitious autoist can pass up the passenger trains on the paralleling Burlington railroad tracks." Necessary improvements in road systems included newer and better bridges. As a result, the first decades of the 20th century would prove a period of profound change for both the technology and bureaucracy behind bridge construction.[51]

VI. Early Government Involvement with Bridges

As discussed above, the federal government became involved in Nebraska's roads and bridges in the mid-19th century. In 1893, a prominent Nebraskan, J. Sterling Morton, then U.S. Secretary of Agriculture, inaugurated the Office of Road Inquiry within his department. The Office initially received an annual appropriation of $10,000, an amount which dropped to $8,000 in 1896. At about the same time, the state finally became concerned with local roads. In 1879, the legislature had confirmed the previous declaration that all section lines be dedicated to public roads 66-feet wide. To fund road work, a three mill tax was established. Little more of significance occurred, though, until 1895 when the State Board of Irrigation was created. Supervision of roads and bridges soon came under the Board's purview. The Governor served as president; other board members were the State Attorney General and the Commissioner of Public Lands and Buildings. The board appointed a secretary, a state engineer, and other assistants as needed. Most bridge work, however, continued to be initiated by counties and local governments.[52]

In 1904, there were 79,462 miles of roads in Nebraska, mostly along section lines. Quality of both construction and maintenance was uneven. Throughout most of the 19th century, this situation was frustrating, but not critical, since roads and bridges were intended for the slow-paced horse. Most traffic was local, with cross-country travel undertaken via rail. Bridge safety became an issue, however, with the increasing weight of tractors and other heavy farm machinery around the turn of the century. Lightweight trusses and stringer spans were ill-equipped to support the heavy equipment, and bridge failures became legion.

This prompted the 1905 legislature to direct the state engineer "to prepare plans and specifications, strain sheets and estimates of cost of any bridges which the county proposes to build" costing over $200. An extra $3,000 was appropriated to the Board of Irrigation to cover the cost of this extra work. The following year the state engineer reported that "this has added a large amount of work to this office.... A set of standard plans has been prepared covering nearly all of the styles of bridges which may be requested." This pioneering set of standard plans appears to have been little used, however, since state help was only to be provided at the request of a county and "very few of the counties have taken advantage of this law." The *Biennial Report* of

the state engineer for the years 1905-6 includes photographs of a pin-connected Pratt pony truss and a five-panel, pin-connected Pratt through truss, both in Madison County, and the 1907-8 *Biennial Report* contains photographs of a 90-foot, six-panel, pin-connected Pratt through truss in Saline County and a 40-foot, three-panel Warren pony truss in Colfax County, all presumably illustrating the new state plans. This appears to be the only time that the state offered Warren truss plans until the 1920s. Occasionally, counties would petition the state engineer to prepare plans for specific bridges, as was the case with the Sargent Bridge, a double-span Pratt through truss built by the Custer County Board in 1908. Although the bridge is no longer a public thoroughfare, it remains on its original Middle Loup River site just south of Sargent.[53]

The automobile, though it aroused much interest, was still a novelty in the first years of the 20th century. A reportedly true incident illustrates early reaction to autos:

> **A gentlemen[sic] traveling across Nebraska in 1903 with his bulldog named Bud, so startled a farmer that the poor fellow leaped from his haywagon and hid underneath. The sight of both driver and dog wearing goggles in an open-top vehicle speeding across the plains must have been a frightening apparition.[54]**

By 1905, however, some began to sense that the automobile was here to stay, and that provision must be made for it. In that year, the Nebraska legislature set a precedent by requiring annual motor vehicle registration, setting the fee at one dollar. A total of 517 vehicles signed up the first year; a decade later the number jumped to 59,140, and to 233,000 by 1920.[55]

To respond to the increasing importance of the state's fledgling road system, the Board's name was lengthened to the "State Board of Irrigation, Highways, and Drainage" in 1911. Two years later, an independent state highway department was established by the legislature. Another 1911 legislative landmark was the creation of the State Aid Bridge Fund, financed by a tax of one-fifth of one mill on the assessed value of property in the state. The amount collected was about $85,000 in 1911 and $90,000 in 1912. The fund provided a fifty percent state subsidy for county bridges over streams 175 feet or more wide. (In 1921, the minimum stream width was decreased to 100 feet.) Money was dispensed on a first-come first-served basis. Design and construction of State Aid bridges was jointly supervised by the county and the state. The law was revised in 1915 to allow funds to be used for the purchase and relocation of existing bridges, as well as for new construction. With the lure of money easing traditional county mistrust of state interference in local affairs, enthusiasm for the program was overwhelming. Only a year after the program's initiation, the state engineer wrote that "this law has done more than any other to stimulate the interest of counties in the building of permanent bridges, and sets an excellent example of the form of bridge construction in this State." The legislature's last appropriation to the fund was in 1933; the fund was closed out in 1936. During the fund's life, a total of 97 bridges at 80 locations were built or purchased. These bridges included most designs popular during the period, from steel trusses and girders to transverse joist spans and concrete arches. A majority were along the Platte and its north and south branches.[56]

In 1911, at the same time that the State Aid Bridge Fund was created, the legislature mandated that all bridges sustain a minimum twenty-ton load:

> The necessity for this is shown by the fact that each year there are a number of bridges, which fail under the twenty-ton-traction loading, and these failures are invariably accompanied by injuries to the men in charge of the traction engine and not infrequently lives have been lost.

Unfortunately, the state engineer noted, "the enactment of this law rendered valueless all plans which had been prepared previous to 1911 in this office, none of them being designed to carry a twenty ton load." The office rushed to update plans, and by mid-1912 could report that "a standard set of plans, together with a number of special designs, have been prepared to meet the requirements of different counties during the past two years. Several counties have ordered sets." The report added that "this law should be amended so as to compel the counties to obtain all plans for bridges from this office." In addition to providing plans, the state office inspected county bridges at the request of county boards. Counties had to pay actual travel costs for the inspectors, but the service was otherwise free of charge.[57]

While 36 counties used state plans for their annual bridge contract letting in 1914, response was significantly less eager than it had been for State Aid bridge money. The state engineer's report issued in 1914 discussed reasons for the resistance, and explained why opposition was imprudent:

> There has been considerable criticism of the twenty ton carrying capacity law in our state and also that the steel bridges built upon state plans cost a great deal in excess of steel bridges formerly built by the counties.... One reason why the steel bridges built under the state plans have cost more is because of the different class of work required which, under the state specifications, requires a better class and grade of shop work and a better grade of erection work in the field and the riveting of all field connections instead of bolting them as has been the practice heretofore. Another reason for the added cost is the fact that many counties in our state did not use a complete set of steel stringers in the floor system but used a majority of wooden stringers. On all state plans steel stringers are specified and required.

The same report, however, chronicled some progress: "Roadwork over the state has wonderfully improved during the past two years by reason of the County Boards of the different counties taking a greater interest in the roads." The state engineer had another reason to be happy: the 1913 state legislature had granted his wish that counties be required to adopt state standard plans for bridge construction. By this time the office had prepared "a complete standard set amounting in all to about 250 highway bridge plans." Superstructure plans included both wood and I-beam bridges spanning 12 to 32 feet with 14-, 16- or 18-foot roadways; steel girder bridges 30- to 40-feet long with 14- or 16-foot wide roadways; riveted and pin-connected pony trusses from 35 to 100 feet; riveted through trusses from 90 to 160 feet; and pin-connected through trusses from 90 to 304 feet. Most truss designs were available with either wood or concrete floors; all had 16-foot wide roadways. Steel pile and tubular pier foundations were also included, as well as standard contract forms.[58]

At the same time, the federal government was slowly taking some responsibility for road improvement. Congress passed the Post Office Appropriation Act in 1912, dedicating $500,000 towards construction of rural roads to facilitate mail delivery. State and local governments had to match two dollars for every dollar of federal funds received. Seventeen states took advantage of the opportunity, resulting in 425 miles of improved roads. This, however, was a very small step in the right direction.[59]

Despite government advances, private citizens became frustrated at the slow pace of progress and began organizing trail associations and "Good Road" clubs. One of the most important to Nebraska was the Lincoln Highway Association, founded in 1912 by Carl Graham Fisher, an Indiana real estate developer who had built the Indianapolis Speedway several years before. Fisher claimed that "the highways of America are built chiefly of politics, whereas the proper material is crushed rock or concrete." He proposed a road stretching from Jersey City, New Jersey, to San Francisco, named in honor of the nation's sixteenth president. The highway, described as "the shortest, most practical route connecting the two coasts, through the heart of the Union," was the country's first transcontinental automobile road. The section through Nebraska, which was completed in the early 1920s, originally passed through Omaha and proceeded west through the state. It was later designated U.S. Highway 30, and its eastern entrance to Nebraska rerouted north through Blair. Paving of a section west of North Platte in 1935 made it North America's first transcontinental paved road. Nebraska was also included in two other important early 20th century routes: the OLD Highway (Omaha-Lincoln-Denver), and the Meridian Highway. The latter, which roughly traced the Sixth Meridian from Winnipeg to the Gulf of Mexico, was conceived in 1911 by the world's first international highway organization.[60]

Private efforts could only go so far, however, and both federal and state governments were soon to make a major commitment to developing the modern highway system.

VII. Cast in Concrete: Bridges of the Early 20th Century

By the second decade of the 20th century, concrete had gained favor as a bridge material. The 1912-14 *Biennial Report* noted that the state had standard concrete plans for:

> **small arch culverts, box culverts, slab bridges from eight to twenty foot spans by two foot intervals; girder bridges from twenty to forty foot spans, by five foot intervals; and arch bridges from ten to fifty foot spans by five foot intervals. The concrete arches also have several different rises given for the same length of span.**

The report added that "this is the first attempt at standardizing concrete plans, specially of the arch type that has been made." Standard bidding blanks were modified to allow county boards to assess the cost of concrete in a way comparable to other bridge types. The state engineer felt that this sort of comparison would result in more concrete bridges being erected:

> **The idea has always prevailed for some reason that to build a concrete bridge took a large amount of money, greatly in excess of a steel bridge. This is misleading and is not the fact. Under the twenty ton loading law as it now exists, the difference between a permanent steel bridge and a permanent concrete bridge is not so very great, and the use of concrete is becoming more popular.**

He continued, however, that "one point must always be born in mind, and that is that a poor concrete job is worse than a poor steel job, and care should be taken in doing concrete bridge work to secure the best materials and properly experienced labor for the construction of the same."[61]

Concrete, used since ancient times, consists of two parts: binder, which is cement, and filler, which for road and bridge work is usually crushed rock, sand or gravel. Cement, essentially calcium oxide, is most often created by burning finely broken limestone. The resulting product is then mixed with water to form cement, which is either soluble in water (non-hydraulic) or, with the addition of silica and alumina, impervious to water (hydraulic). Obviously, only hydraulic cement was appropriate for use in road and bridge work. If the silica and alumina occurred naturally in the limestone, "natural" cement was created. While sometimes employed for bridge building, natural cement tended to be unpredictable. It was supplanted in the United States in the 1880s by Portland cement, in which silica and alumina were artificially introduced to achieve consistent quality. Quality control continued to be a problem, however, until several decades into the 20th century when aggregate was more carefully selected and washed. Ascertaining correct proportions of water, cement, and aggregate was also more of an art than a science, and mistakes led to structural failures. In 1874, metal reinforcing was introduced to compensate for monolithic concrete's lack of tensile strength. By the early 1890s, this technology was being applied to bridge construction. A number of reinforcement systems, many patented, have been developed since that time. The type chosen for a structure often affects its appearance as well as its strength.[62]

Although all metal and much lumber had to be imported to supply Nebraska's bridge needs, the state was abundantly stocked with raw materials for cement. One historian mentioned that "in pioneer days, many sod houses of Nebraska were plastered inside and out with a native magnesia cement." The area's first recorded quarrying of limestone was undertaken northeast of Omaha in 1819 by army troops under the direction of Major Stephen Long. Later in the 19th century, a number of lime kilns were operated in the southeastern part of the state.[63]

Railroads were the first to utilize concrete on a large scale for bridge construction, adapting it first for substructure components, then for actual bridge structures. Nebraska's Department of Public Works acknowledged this precedent in a 1919 publication:

> **Highway and Bridge engineers in many of the Western states following the lead of the railroad companies, have resorted to concrete masonry construction in bridge building, the chief reason being that concrete bridges when properly built, will remain as permanent structures for an indefinite period of time.**

All concrete for bridge and pier construction was probably imported from out of state until the early 20th century. In 1915, apparently spurred on by the state's enthusiasm for concrete bridges, a cement plant opened (or perhaps reopened) at Superior. It was not until 1929, however, that the state's second cement plant opened in Louisville, indicating that other sources were apparently still supplying a large portion of the state's significant demand. In the mid-1910s, the state engineer had mused that "one difficulty to overcome in the development of the cement industry in Nebraska will be

the competition of large plants located in nearby states.... Most of these plants have cheap fuel and good cement material.[64]

Regardless of where the cement originated, a concrete bridge building boom soon ensued. A 1919 highway department article explained that:

> **in making a decision between an arch and a beam design there are several determining factors. Cost is usually the first consideration.... The chief determinant however is the height of the grade above high water. Beam bridges are not suitable for carrying high fills while arch bridges can be built to support any height of fill. Arches are especially adapted for use in deep ravines, can[y]ons and other places where a high fill must be supported.**

The article added that:

> **simple slabs are economical for spans under 12 feet, beam bridges supported on stringers or longitudinal beams from 12 to 25 feet and slab bridges with two heavy side beams carrying lighter cross beams supporting the floor slab, 25 to 35 feet. Beam bridges have been built up to 70 feet in length but they are not generally economical as arch bridges are cheaper.... On very long bridges, where the grade is high above the river bed, the cost of the piers largely determines the cost of the bridge. Under these conditions it is cheaper to build long span steel bridges and to renew them from time to time.[65]**

Aesthetics became an important consideration in bridge selection in the 1910s. Designers were at first unsure how to treat concrete, and either textured it to imitate stone or left it a plain, monolithic hulk. After becoming more accustomed to the material, however, designers became more creative. Waddell insisted that "there is little excuse for building an ugly concrete bridge." Most people, though, were accustomed to the tracery of truss bridges. While immediately appreciating the arch form in concrete, the public was initially unimpressed by the sparse look of girder and beam spans. A contemporary wrote that "frequent objection has been made to the use of them for the reason that they are not susceptible to artistic treatment." While the writer maintained that "this objection no longer exists," the records show that if there had been a popularity contest for bridges in the early 20th century, concrete arches would have won by a long shot.[66]

The 1910s saw concrete used for a number of major river crossings, often replacing the trestles, combination spans, and iron trusses from the last decades of the 19th century. A series of State Aid concrete girder bridges was erected along the Platte and North Platte, including structures at Overton, Lexington, Bridgeport, Bayard, and McGrew, but the more graceful arch was soon the style of choice. Multiple-arch bridges were built over the Niobrara River near Carns in 1912 (ROCK01) and over the Republican River near Cambridge in 1914 (FURN08), and another downstream at Superior a year later, perhaps in honor of the new cement plant there. A string of concrete arches was built in Scotts Bluff County in 1918-19 at Henry (SCOTT02), Morrill (SCOT06), Mitchell (SCOT07), Scottsbluff, and Minatare. The highway department described the modular procedure used to build the Scotts Bluff County bridges:

> **A one-half yard mixer plant is erected and a trestle is built longitudinally with the bridge. This trestle has a track on top for the concrete cars and a lower track to carry stripped forms and lumber ahead. The upper track is utilized for the same purpose and a short boom is attatched[sic]**

to the concrete car and the panel forms on spandrel walls are quickly unbolted and moved ahead.[67]

Further downstream was the 14-span Birdwood Bridge north of Sutherland (LINC04). Other concrete arch bridges were scattered along the Platte at Kearney, Shelton, Grand Island and Central City (MERR05). Concrete arches also bridged the Republican at Bartley in 1918. The latter, however, was to be the undoing of this style: it collapsed within a few years of its construction under pressure from high water. The last major concrete arch bridge was completed south of North Platte in 1924, and a report at that time noted that "the present tendency of design is toward steel truss or transverse joist type with concrete floor and foundations in place of the heavier multiple concrete arches."[68]

While smaller truss bridges had already achieved the appearance - if not the qualitative substance - of standardization, larger structures prior to concrete designs had generally been customized to the particular situation at each crossing and each had, thus, a relatively unique appearance. Concrete girders and arches, however, were smaller units of 33 to 36 feet and 50 to 85 feet, respectively, which could be strung together to fit the necessary span. Rhythm of the spans, design of the balustrades, and any ornamentation could look identical from Central City to Henry. These bridges thus represent the first true standardization of major river bridges in the state.

More modest concrete bridges, as well as concrete arch and box culverts, also appeared around the state during the 1910s. Two bridges in Webster County (WEBS01 and WEBS02) display local forays into concrete arch construction. These two single-span structures, one measuring 36 feet and one 38 feet, date from 1911. Their guardrail design - pipe rails supported by pipe posts set into a low concrete parapet - is not typical for the time, and mark them as non-standard plans. In fact, Webster County commissioners rejected the state's plans in 1910 and again in 1913, declaring "that they were not in harmony with the board's ideas as to what they want." Despite this opposition, the state engineer finally won over the commissioners and they adopted state plans later that year.[69] The most aesthetically successful of these single-span structures is a small bridge on the outskirts of Nebraska City (OTOE05). Built in 1912, it features cast concrete balusters enframed by handsomely proportioned concrete bulkheads.

A surprising number of small, state standard plan, concrete bridges survive from this period, a tribute to the persuasiveness and unflagging energy of the state engineers and their staff. The 1915-16 *Biennial Report* shows a small concrete arch bridge in Fillmore County, a 16-foot concrete slab bridge in Clay County (possibly the Onken Bridge (CLAY12) over Sandy Creek just northeast of Glenville), and an arch culvert in Seward County. Clay and Fillmore counties especially called on the concrete arch for a number of bridges in the early decades of the 20th century, and these neighboring counties harbor the state's largest surviving collection of this type. Other well-preserved concrete arches are the well-documented Stewart Bridge (NUCK02), a 46-foot span built over Big Sandy Creek in Nuckolls County in 1915, and a 40-foot span (SALI04) about 5 miles southeast of Friend in Saline County, where the construction date, 1920, is conveniently noted on a plaque. All have monolithic cast railings with recessed panels.[70]

The interest in small concrete bridges appears to have been concentrated in the state's southeast corner, a logical development considering that Superior was the probable source of the cement. There were, of course, exceptions, such as the 20-foot reinforced concrete slab bridge (HICH01) in Hitchcock County, two miles east of Stratton, built in 1908 by the otherwise obscure Ideal Cement Company.[71]

VIII. The Federal Aid Highway Act

President Woodrow Wilson signed the Federal Aid Highway Act on July 11, 1916, ushering in a new level of federal government commitment to road building, which swept the states along in its wake. Part of the impetus was from the postal service, which had difficulty delivering mail in many rural areas because of the poor condition of roadways. Business leaders also promoted the legislation, citing the need for more reliable roads to get farm commodities to market. The legislation's goal was to develop an interconnected system of well-built and well-maintained roads throughout the country. Seventy-five million dollars was initially available to states, apportioned by a ratio based on population, area, and miles of rural postal roads. The allotment had to be matched dollar for dollar by the states, and could only be used on projects approved by the U.S. Bureau of Roads. Expenditures could not exceed $10,000 per mile, not including bridge costs. The latter were paid by counties, sometimes with state assistance. Funds could only be used on rural roads, or on roads in communities with under 2,500 inhabitants.[72]

Nebraska's share of the initial appropriation was about $1.6 million, which it matched by placing a mill levy on real estate. Although the state received an additional $4.27 million in 1919, for most years during the 1920s its annual appropriation remained around $1.6 million. Because of the distribution ratio, this funding far exceeded what Nebraska would have obtained on a strictly per capita basis. In 1922, a state publication explained that:

> **Nebraska receives in Federal Aid about 7-1/2 times more in dollars than she pays into the fund, and New York, for instance, pays into the fund 10 times more than she receives from Federal Aid.... It is the only instance within our knowledge where we can make New York pay for some of our improvements.[73]**

In order to qualify for federal money, states had to designate roads eligible to receive federal aid. Nebraska complied. As soon as the routes were decided, however, some counties concluded that their responsibility for these roads had ended and quit maintaining them. Even roads which had been improved with federal aid were deteriorating within months of construction, leading the Bureau of Roads to threaten to withhold further funds unless Nebraska passed legislation providing for adequate maintenance. To be fair, maintenance was not an easy task in the vast state. There were not only the ravages of weather and vehicular traffic to worry about: a report complained that in the sand hills region "large herds of cattle tramping around on the roads do considerable damage."[74]

In addition to delineating federal highways, Nebraska designated a state highway system in 1919, consisting of about 5,000 miles of roads organized into 88 routes. This network, which essentially went from county seat to county seat, was intended to connect farm and market. It was supplemented by a county road system authorized at the same time.[75]

Also in 1919, the state government underwent major reorganization. The new Civil Administrative Code Bill abolished the Board of Irrigation, Highways and Drainage, replacing it with the Department of Public Works. Within this new department was the Bureau of Roads and Bridges with three subdivisions: the Division of Construction, the Division of Road Equipment, and the Division of Maps and Plans. The Division of Maps and Plans was responsible for "preparation of Federal Aid Road plans, State Standard Bridge plans, State Aid Bridge plans, State Institution Paving plans, Special Bridge and Culvert plans for Federal Aid Roads, and special bridge plans for the various counties." In the 1919-20 biennium, for example, the division revised 48 standard bridge plans, checked 52 detailed shop drawings, completed eleven new standard plans and 96 calculations for these plans, finished plans for construction of seven State Aid bridges and for repair of an additional twelve, developed plans for 54 special bridges and culvert for Federal Aid roads and 25 special county bridges, checked 27 special county bridge plans, and revised one set of bridge specifications.[76]

As is evident in this tally, state standard plans were reworked again in 1919 "on account of the evolution of traffic," this time under the watchful eye of the federal Bureau of Roads. Roadways for all 20-ton capacity bridges were widened to 20 feet, while a 16-foot roadway was still considered adequate for 15-ton bridges. As time allowed, however, all old standard plans were being revised to include 16-, 18- and 20-foot widths to "eliminate many extras on bridge contracts now required to cover roadways which are not shown on Standard Plans." Detailing was improved, and "provision is also being made for the addition of bituminous wearing surface to a depth of two inches at any further date when it may be desired." The plans were revised yet again in 1923. Among other things, the low-hanging bottom chord was eliminated on 20-ton riveted trusses and detailing of shoes and panel points was simplified. Standard specifications, which had been introduced in 1917, were revised in 1920, using specifications from other states as reference. Although these had to be approved by the Bureau of Public Roads, the federal government did not allow any of its subsidies to be used for bridge construction until a policy change in 1923.[77]

All of this work was completed by a department that was hampered by understaffing. In a 1919 report, the highway department complained that they had been:

> **handicapped during the present year by a shortage of engineers, for making preliminary surveys. This condition has been caused by the great number of engineers who are still in the army service, and partly by the universal demand caused by the necessary expansion in the Department necessitated by recent road legislation.[78]**

In 1923, a division specifically for bridge design was created in the Department of Public Works. Three years later, the state took over all responsibility for letting contracts for state and federally funded projects, eliminating the past practice of county participation. To streamline the procedure, the state followed the lead of the counties in consolidating contract lettings:

At one letting which was held April 27th, 28th and 29th, 1927, 115 bidders submitted proposals for work on 142 different projects and contracts were awarded for 343.9 miles of grading work with the construction of incidental culverts and guard rail, for 848.9 miles of gravel surfacing and for the construction of 55 bridges. The amounts of the contracts awarded at that time totaled more than $3,488,000.[79]

With the growing number of projects came more sophisticated oversight. Before contracts were let, a representative from the department inspected the proposed site. Upon approval of the location, field engineers conducted a more detailed analysis of the general drainage area and of the specific soil and geological conditions. The bridge division then weighed field information, traffic demands, and economic considerations to select a bridge type. Bridge design was a laborious task, involving calculations for stresses, determination of necessary structural components, and preparation of detailed drawings. Because of the possibility of error and its potentially grave consequences, special "checkers" repeated the process to insure a correct plan. After the contract was let, a field engineer supervised the contractor to insure that work was done according to plan. Samples of construction materials were tested by the division's lab, established at the engineering department of the University of Nebraska in the early 1920s to analyze materials used in highway projects receiving federal or state aid. The completed project was inspected by appropriate officials from the Department of Public Works and, if accepted, final payment was made.[80]

Beginning January 1, 1926, the Department of Public Works also assumed responsibility for maintenance of the entire highway system, except sections in communities with populations over 1,400. These additional tasks severely strained the state's budget. Some balance was regained when county funds, as well as state funds, were permitted to match federal aid dollars.[81]

Nebraska and Florida were unique in that they were the only two states to adopt a "pay as you go" policy for road and bridge construction. While other states issued bonds to finance highway work, Nebraska preferred to stay within the limits of money it could raise from property taxes and from user fees, such as motor vehicle registration. The state's first gasoline tax, two cents per gallon, came in 1925. In 1929, it was raised to four cents. In 1926, the state engineer wrote that "even now, when more money is being spent than in previous years, the yearly expenditure is but one-third of that on the trunk highway system of Minnesota, and one-fifth of that spent annually in Missouri, and a little over one-half of what is spent in Iowa and Kansas." A 1928 report noted that "the expenditures of state funds each year in many middle western states amounts to as much as the total expenditures to date, or for the last ten years of state funds for construction in Nebraska."[82]

The state's parsimony forced creativity in the highway department, and Nebraska gained national - even international - attention for its innovations. The state pioneered economical techniques in dirt highway construction. Experiments were also conducted with oil coating, gravel, and, in the sand hills, hay. An official of the Argentine Highways Department, one of many visitors seeking information about the state's highway construction methods, commented that "they get more roads for less money than any other state in the two Americas." As late as 1940, the head of Nebraska's highway department asserted:

> I believe there is no doubt but that Nebraska has been taking a leading part in the development of low-cost pavements.... It is felt that one might say that the low-cost pavements have been "custom-built" in Nebraska, after careful investigation of soil, moisture, drainage, and other conditions that enter into the problem.

At the same time, he had to admit that it was only within the past five years that sixty percent of the state highway system had been paved.[83]

Significant expenditures for some things were, however, unavoidable. As the number of roads and vehicles increased, accidents at railroad crossings became a more common occurrence. As of 1917, there were about 11,300 grade crossings, an average of one every thirteen miles of highway. Only about five percent had any sort of protection, and those were mostly in densely populated areas such as Omaha and Lincoln. Among the grade separations claimed by Lincoln was the nineteen span, 900-foot long, deck plate girder North Tenth Street Viaduct (**LANC18**) built in 1910. Early rural grade separations, such as a 1912 deck plate girder bridge carrying the Chicago, Burlington and Northern Railroad over a road and stream in Pawnee County (**PAWN02**), were extremely rare. Elimination of highway-railroad crossings became a major emphasis in road improvement in the 1920s. While some crossings could be avoided by realigning roadways, others required construction of viaducts and subways.[84]

Plate girders were frequently utilized for highway overpasses, as in the Pawnee County and Lincoln viaducts, and for track overpasses, such as the 81-foot, deck plate girder span carrying railroad tracks over a county highway north of Emerald in Lancaster County (**LANC14**). This structure, which measures 320 feet including the concrete slab approach spans, was built by the Wisconsin Bridge and Iron Company in 1921.[85]

IX. Bridges of the 1920s

In addition to innovations in road construction, Nebraska created and popularized a new bridge type, the transverse joist girder. Robert Z. Drake, of H-beam pile and Standard Bridge Company fame, is credited with inventing this design as well as the multiple punch necessary for its manufacture. The first bridge of this type appeared in the early 20th century. Two pioneering, small-scale transverse joist girder bridges are a 39-foot span in Pawnee County (**PAWN11**), which incorporates unusual, polygonal top chords, and one in Buffalo County (**BUFF09**), built in 1918 soon after the state engineer adopted the design as a state standard. In the late 1910s, transverse joist girder bridges were added to the state's set of standardized plans. At about that time, the style was chosen to replace the ill-fated concrete arch bridge over the Republican River at Bartley, and it appeared over the Platte at Brady, Cozad and Yutan. More followed at Hershey (**LINC03**), Boelus (**HOWA02**), Grand Rapids (**HOLT01**), North Platte, Gothenburg, Gibbon, Duncan and Plattsmouth. Spans were typically fifty to sixty feet for major river bridges, with roadways ranging from 16- to 20-feet wide. Shorter spans appeared on smaller bridges, such as the 44-foot span on a Nemaha county road bridge south of Johnson (**NEMA06**). By 1927, there were more than 1,000 transverse joist girder bridges in the state.[86]

An engineer in the 1920s praised the transverse joist girder design as "one of the simplest types of permanent bridges manufactured." As the name implies, joists run perpendicular to the roadway, fastened at each end to the web of I-beam girders. Used in both through-girder and deck-girder configuration, the design was relatively inexpensive because the components could be easily standardized, minimizing custom design work for fabrication. Erection was quick, using a small labor force and requiring no expensive falsework.[87]

As with every bridge style, the transverse joist girder had some drawbacks. Economics of construction dictated a maximum width of twenty feet. Widening the bridges at a later date was difficult and expensive. Ever increasing traffic volume demanded wider roadways, sealing the fate of the transverse joist girder bridge: their construction virtually ceased by the late 1920s.[88]

In the meantime, trusses continued to be chosen for longer spans when there was a need to minimize substructure. A string of double-deck, riveted, Pratt through truss spans, designed for pedestrian and vehicular traffic on the upper level with rail tracks below, carried the Meridian Highway from Nebraska to Yankton (CEDA23). Built between 1920 and 1924 and costing over $1,000,000, construction was arranged and financed by local business interests. The superstructure was fabricated by the American Bridge Company and erected by Kelly Atkinson Company; the substructure was built by Missouri Valley Bridge and Iron Company. The bridge, which was designed by the prominent Kansas City engineering firm Harrington, Howard and Ash, included a patented Waddell and Harrington vertical lift span to accommodate Missouri River navigation. This popular movable bridge design was named after its developers: John Harrington, a principal of the Kansas City firm, and J.A.L. Waddell, his former business partner.[89]

Harrington, Howard and Ash was also responsible for the design of the Abraham Lincoln Memorial Bridge at Blair (WASH06), with Sverdrup and Parcel of St. Louis serving as consulting engineers. This structure, too, was promoted by a local group, which formed the Nebraska-Iowa Bridge Corporation. When completed in 1929, the toll bridge became the official route of the Lincoln Highway, saving drivers 28 miles and allowing them to avoid the inevitable delays of downtown Omaha traffic. Construction was overseen by the Woods Brothers Construction Company of Lincoln, Nebraska, a major contracting firm which had already been involved with development of five Mississippi River bridges. The 1,340-foot superstructure consisted of three massive Pennsylvania truss spans, totalling 1,000 feet in length, plus deck truss and steel stringer approach spans. It was built by the Wisconsin Bridge and Iron Company, Milwaukee, with the Kansas City Bridge Company responsible for the substructure.[90]

Sverdrup and Parcel teamed up again with the Woods Brothers in 1930 at Nebraska City to build the Waubonsie Bridge, named in honor of a Pottawattami chieftain. The Waubonsie Bridge Company, the toll bridge's promoter, was actually a subsidiary of the Woods Brothers, formed by the company and a group of Nebraska City businessmen. The Kansas City Bridge Company was responsible for erection of the structure, which cost slightly under $1 million. Featuring an early use of the principle of continuity, the through-truss superstructure incorporated silicon steel members, which were stronger and lighter than the more commonly used carbon steel. Continuous trusses were also employed at a contemporary toll bridge just upstream

at Plattsmouth (**CASS08**), which was designed, fabricated and erected by Omaha Steel Works.[91]

A contemporary engineer found the Waubonsie's substructure noteworthy as well: "The supporting piers are very distinctive in a modern or skyscraper design, employing set-backs at various elevations, as seen in modern skyscrapers." He also claimed that it was "the first bridge to be completed with a complete system of electric navigation lights, with a standby kerosene system." Conduits in the curbs concealed wiring.[92]

For bridges across other waterways, the tried and trued Pratt pony truss was still often the choice for large state and federally aided bridges in the 1920s. Instead of light members and pin connections, these trusses were made from heavy-duty components riveted in place. Improved truss designs had higher curbs, stronger guardrails, and 22-foot or wider roadways. Floor beams no longer projected below bottom chords but were flush with them. Series of seven to ten, 80- to 100-foot, five-panel Pratt pony trusses crossed the North Platte at Broadwater (1924-25, **MORR01**), Lisco (1928, **GARD01**), and Lewellen (1927, **GARD02**), and the Platte at Silver Creek (1924, now relocated south of Grand Island, (**HALL01**).[93]

The tendency toward heavier construction was visible on the county level, too, thanks to almost universal use of standard state plans. While pinned connections continued to appear on some through trusses with large spans, rigid connections were more and more prevalent. Almost all pony trusses were riveted by the mid-1920s. County highway ponies, such as the 100-foot span, five-panel Pratts over Turkey Creek near Dewitt in Saline County (1929, **SALI15**) and over the west fork of the Big Blue northeast of Dorchester (**SALI17**), were very similar to the State Aid trusses used to bridge the Platte and North Platte.[94]

While heavier trusses offered longer life and greater load capacity over lengthier spans, timber stringer and trestle bridges were a more economical choice for short spans on little traveled roads. For small bridges "where traffic is dense and stream characteristics are well known," 25- to 32-foot I-beam spans were often used. Both timber and I-beam spans were usually built with a 24-foot roadway by the late 1920s.[95]

Timber was decidedly out of favor, however, for bridges on major routes. Monthly reports from the Department of Public Works in 1919 reported case after case where old wooden bridges were being replaced by concrete structures, including four on the Lincoln-Crete-Dorchester Highway and two on the Cornhusker Highway north of Havelock. In Lancaster County, a number of new bridges were "to be constructed of concrete with twenty-four foot roadways and the road grade will be twenty-six feet wide on all of them." A surviving example is the 120th Street Bridge on the south edge of Walton (**LANC09**), a concrete structure built by local contractor Martin-Day Company in 1920.[96]

On a smaller scale, concrete culvert pipe was produced by fifteen plants in the state by 1931. Counties also made their own culverts, keeping road crews gainfully employed during the long winter months. As early as 1916, a state report described this "cottage" industry, and also discussed culverts of a size which required construction at the site. Forms were of wood or metal. The same technique and grade of concrete was also used for bridge wing walls and abutments.[97]

X. The Great Depression: A Boon for Bridges

While the Great Depression devastated much of the United States, the road system benefitted. The unemployed needed jobs, and highway construction produced them in abundance. In 1933, Nebraska received $7,828,961 from the Federal Emergency Relief and Construction Act of July 1932, not more than fifty percent of which was to be used on the Federal Aid highway system and not less than twenty-five percent to be directed to extensions of the Federal Aid highway system into and through municipalities. While originally the act required states to match funds, that provision was later repealed, setting a precedent for 100-percent federal highway subsidies. The act was also a 180-degree shift from previous restrictions limiting use of appropriations to the federal aid system, with no allowance for urban highway construction. Not only did the cities need the improvements, but, in addition, most of the unemployed were concentrated in urban areas. Subsequent legislation encouraged grade separations, bridge widenings, and the development of a feeder road network. By 1934, an average of 18,600 Nebraskans a month were employed on federal and state highway work. The majority of these were laborers, but the work force also included "many engineers who had been thrown out of employment by the retrenchment policies of the railroads, architectural and municipal offices and other employers of engineers." The regular pre-Depression federal aid program, which required state matching funds, was reinstated in July 1935, but thereafter funds could be used for urban as well as rural federal highways.[98]

Since employment was as important a goal as construction, federal funds came with some unusual stipulations, in effect turning the clock back to the days before many labor saving machines were available: "cement and reinforcing steel shall be unloaded by hand labor methods.... Finishing of structural concrete surfaces shall be done by hand rubbing or other labor methods.... Carpenter work and form work shall be done by hand labor methods and the use of mechanical saws will not be permitted at the bridge site.... All painting shall be done without the use of mechanical equipment." Civil Works Administration projects permitted not more than ten percent of funds to be used for equipment or materials, so the state was forced to supply these on most projects. By the mid-1930s, the Federal Emergency Relief Administration corrected this overzealous rule and allowed greater expenditure for materials.[99]

The Department of Public Works, renamed the "Department of Roads and Irrigation" in 1933, gained hands-on experience with the intricacies of bridge construction in the process of managing federal relief projects. While the state had occasionally directed prison labor for road construction in previous decades, it was not until 1935-36 that the department became so frustrated by high bids for bridges at McCook and Franklin that it became its own general contractor, hiring and supervising labor directly.[100]
While these federal works projects greatly spurred bridge construction in Nebraska in the 1930s, other factors were influential as well. Woes brought on by the Depression were compounded by weather extremes that first dried, then drowned, the state. The drought phase led to widespread interest in irrigation. The resulting projects created canals which had to be bridged. Then in May and June 1935, the sky drenched

southern Nebraska leading to disaster in the Republican River valley, where 341 miles of highway, 307 bridges and 1,007 buildings were destroyed. The state received $150,000 outright from the Federal Emergency Relief Administration and an additional $276,000 Emergency Flood Relief appropriation, which had to be matched by state dollars, for materials and labor to build and reinforce county bridges damaged by the flooding.[101]

The rural electrification movement also stimulated bridge building. The 33-mile Loup River Power District canal, completed in 1936, necessitated construction of 24 farm drainage bridges, 24 county bridges, two railroad bridges, two city street bridges, and three state highway bridges.[102]

Another change during this decade was the movement towards professionalism in the engineering field. The department had experienced some difficulty with staffing in the mid-1930s: "There was an unusually high percentage of turn[]over in personnel, due to resignations of many trained designers and inspectors, who obtained employment with various other Public Works projects, both within this State and elsewhere." Apparently, however, this problem had eased by 1937 when legislation became effective requiring many state highway department employees, from heads of divisions and engineers down to the project engineer level, to be licensed as professional engineers. The State Board of Examiners for Professional Engineers and Architects was created to establish criteria and to enforce compliance. By the end of 1938, 184 state engineers had qualified, and an additional 35 were at some stage of the application process. Instead of being jacks of all trades, as had been necessary in earlier days, engineers became more specialized. The department found that "a higher degree of efficiency has been obtained and better work has been produced by those engineers who have been trained principally in the preparation of plans and are not called upon to divide their time between office and field work." During the same period the highway department was once again reorganized, and the Division of Maps and Plans and the Division of Bridge Design were consolidated under a new Division of Design.[103]

XI. Bridges of the 1930s

The 1930s saw significant changes in both superstructure and substructure design. The days of the ubiquitous H-beam pile were over. Battered steel pile abutments were introduced in the early 1930s. These could be driven into frozen ground, permitting year-round construction. Later in the decade, the department experimented with concrete slope protection, such as that covering the banks under the Verdigris Creek Bridge in Knox County (**KNOX13**). Bent design underwent a transformation as well. Twelve of the bridges built during the 1935-36 biennium were supported by open steel pile bents, a simplification of earlier concrete-encased bent designs. The state engineer explained that the change was "due to a more lenient attitude in the requirements of design on the secondary highway systems" on the part of federal and state agencies. On the other hand, the department took pride in producing attractive substructures

where appropriate. For example, the 396-foot long Beatrice Viaduct, built in 1935-36, was "notable... for the architectural treatment of the columns supporting the superstructure."[104]

A new bridge design conceived by the department in the early 1930s called for yet another substructure. Thirty percent of the 281 bridges contracted by the state in 1931-32 and thirty-eight percent of the 242 bridges in the following biennium were "concrete slab bridges with substructure of creosoted timber piles capped with reinforced concrete beams." While the concrete slab was initially used instead of box culverts, the department soon concluded "that the concrete slabs may be used to just as good an advantage in certain locations where steel spans had to be used previous to the advent of the concrete slab type." An excellent example of this slab-on-timber type is the 47-foot span completed two miles north of Mason City in 1934 (CUST07). When culverts were called for, preference was for concrete, multiple box designs.[105]

Concrete slab bridges and box culverts were noted for utility and economy, and were excellent choices for rural settings where those traits were of primary importance. In urban areas, however, aesthetics were an issue. A provision requiring that at least twenty-five percent of some federal relief funds be directed to urban construction had, according to a department report,

> **its effect on certain bridges and grade separations and is the cause of certain in[n]ovations with respect to bridge design. It was required that such bridges should be given architectural treatment to the end that their appearance would be in harmony with the general scheme of beautification attempted by the average mid western city.[106]**

These aesthetic concerns led to widespread use of the rigid frame bridge, a monolithic, flat-arch style of reinforced concrete or steel with concrete facing. Developed by New York's Westchester County Park Commission in the early 1920s, the style was felt to be both picturesque and practical. It was used extensively for viaducts and subways, including structures at Hastings, Falls City, Auburn, Emerald, North Platte and York. To further ornament the arch of the Saddle Creek Subway (DOUG11) in Omaha, old stone curbing on Dodge Street that was being removed by a federal aid project was cleaned and cut by Civilian Works Administration workers and installed as facing. Nicely detailed concrete handrails and ornamental lamp posts decorated the West O Street rigid frame bridge in Lincoln. About 1937, the rigid frame design was called on for the state's first rural highway grade separations, cloverleaf intersections on Dodge Street (DOUG10) and Center Street in Douglas County. The Hastings Subway is further distinguished by the fact that the structure's steel frame was the first in Nebraska to be completely joined by electrical welding. This experiment was the result of the department's decision to send a staff designer to a renowned welding school in Cleveland.[107]

A more ancient technology, masonry, had a brief revival thanks to labor-intensive federal relief programs. A particularly fine example is a single span, stone arch bridge in Lancaster County (LANC16), which features finely finished voussoirs and tooled mortar joints. Harlie Skaggs served as foreman for this and several other Works Progress Administration projects in the county, including two steel stringer bridges with substructures of random ashlar (LANC04 and LANC05). Nemaha County has two similar, well-detailed, stone arch bridges that appear to be the work of a federal relief

program (NEMA18 and NEMA19). A series of stone arch culverts in Richardson County are probably also products of the WPA.[108]

While stone is an interesting digression, the growing popularity of deck steel girders is more typical of the period. By the mid-1930s, the state engineer noted that "the steel-truss type of bridge is being used sparingly, due to the better adaptation of deck construction to the Nebraska terrain and stratigraphy." Girders for deck spans were basically large-scale I-beams, and the first bridges utilizing them were essentially simple stringer structures. Deck steel girder roadways were usually 22- to 24-feet wide by the late 1920s, and they could be easily widened if necessary. Typical span length increased during this period from fifty to sixty feet, although smaller lengths were also used.[109]

When steel mills increased the maximum girder web depth from 30 to 36 inches in 1928, feasible simple span length jumped from 62.5 to 75 feet. This, however, was not significantly longer than the typical transverse joist girder spans then in use. A major breakthrough came when it was discovered that much longer spans could be created using the principles of continuity and cantilevering. In the early 1930s, Nebraska experimented with continuous spans for bridges over 120 feet total length. Josef Sorkin, a bridge designer for Nebraska, published an article in *Engineering News-Record* explaining that:

> **the advantage of a continuous design over a simple-span design is purely that of economy, manifested in two principal ways: (1) The material is used more efficiently, and (2) the allowable stresses need not be reduced due to the relative shallowness of a beam in longer spans.**

Sorkin added that "complications in providing for the expansion and contraction of unduly long beams suggest that in multiple-span bridges groups of three continuous spans are desirable."[110]

Sorkin wrote an engineering thesis on cantilevering, a method which further expands the potential for span length. The department tried the technique on girders with the Chapman State Aid bridge in 1932, but the 64-foot span was not much of an advance over existing designs. With the 679-foot Loup River bridge north of Cairo, however, the department was far more daring. The 1933-34 *Biennial Report* claimed that the "central span of 115 feet is the longest deck steel girder highway bridge span constructed of standard rolled beams, to be found in the United States." Others credited the span with being the longest of its type in the world at the time of construction. The department's report emphasized the significance of the accomplishment by reminding readers that "up to a recent date the maximum span length obtainable for girders was 60 to 65 feet although the average length most generally used was in multiples of 50-foot spans." Further development by the state resulted in efficient design and construction, displayed in the winter of 1934-35 when the same plan was used for State Aid bridges at Brule (KEIT01) and Roscoe (KEIT02), both completed within a few months.[111]

As usual, money played a role in the department's enthusiasm for cantilevered spans. The longer spans meant fewer piers, often resulting in significant cost savings. In addition, the design required relatively little maintenance. By 1932, the department pronounced that the deck steel girder was "now considered to represent one of the

most permanent and adequate types of structure yet devised for this region." In addition, "while various other groups show a cheaper first cost it is believed that, owing to the long life and low maintenance cost of deck steel girders with concrete substructures, they will prove to have a lower annual cost over a long term of years." The straightforward girder bridge design shared the positive aspects of transverse joist girder bridges in that it was relatively inexpensive to fabricate and erect. Also, this type could easily be adapted to a skew, a distinct advantage since the department calculated that in the 1931-32 biennium "21.6% of the jobs tabulated are either skewed or curved in plan."[112]

Occasionally, the department took an opportunity to consider factors other than economics. Sorkin and fellow engineer John G. Mason explained that "aesthetic treatment of Nebraska bridges is seldom economically justified due to the alluvial character of the streams - typically wide and shallow." Simple, undramatic designs were the most pragmatic for such waterways. However, when they were called upon to design the Bryan Bridge over the steep-banked Niobrara near Valentine, Mason and Sorkin were convinced that "any structure of ordinary appearance would mar the natural beauty of the banks and immediate surroundings." As a result, "arched cantilever spans were adopted in spite of the slightly greater cost." The 290-foot deck truss structure, built in 1932, won the American Institute of Steel Construction's annual "Most Beautiful Bridge" award for its class.[113]

The continued demand for new bridges across the Missouri River during this decade provided financial rather than aesthetic challenges. Given the country's troubled economic situation, federal subsidies were needed to foster any construction. Citizens of Omaha discovered this in 1931, when the bonds that the city issued to finance construction of a bridge between south Omaha and Council Bluffs failed to find buyers. After President Roosevelt initiated his New Deal, an appeal to the Public Works Administration yielded a loan and 30-percent grant totalling $1,650,000. Ash, Howard, Needles and Tammen, successor to the Kansas City firm previously active in Missouri River bridge design, planned the 2,126-foot structure, which included a two span, 1,050-foot, silicon steel, continuous Warren truss (DOUG13). The bridge, which opened in January 1936, was built by the Kansas City Bridge Company.[114]

The same engineers were also responsible for the innovative design of the Brownville Bridge (NEMA17), built in 1939 with the assistance of a $311,580 PWA grant. The two span, 840-foot, continuous through truss rested on piers built without using traditional pneumatic construction. Instead, cylinders formed from interlocking steel sheetpiles driven down to bedrock served both as bearing piles and as the cofferdam for pier work. This method, developed in 1937, avoided the high equipment and labor costs associated with pneumatic caissons.[115]

John Harrington, a former principal of Harrington, Howard and Ash, established a partnership with Frank Cortelyou, and the firm was hired to design and supervise construction of the Missouri River bridge at Rulo (RICH22). The bridge was opened to traffic in 1939, funded by a PWA grant of $326,250 plus $435,000 worth of bonds. Three, 376-foot, Pennsylvania trusses crossed the main river channel, with both ends approached by five deck truss spans, each measuring about 100-feet. Streamlined set-backs in the concrete piers echoed architectural styles of the day.[116]

XII. Deprivations of War: The 1940s

The onset of World War II brought highway plans to an abrupt halt. Funds and most construction materials, especially steel, were diverted to the war effort. New concrete bridge designs were developed which compensated for the lack of reinforcement by calling for greater amounts of concrete. The use of additional concrete increased costs, but not as fast as prices skyrocketed for other materials in short supply. The maximum length of central spans of cantilevered concrete slab bridges that could be justified economically increased from 37.5 to 48.5 feet. Soon even concrete became hard to obtain, and the Department of Roads and Irrigation was forced to limit work to emergency construction and maintenance. In more than one instance, the highway department turned to timber construction, as it did for the Brownson Viaduct in Cheyenne County (CHEY01). The state also helped the war department by loaning idle highway equipment, constructing auxiliary landing strips along highways, and developing roads leading to military installations. It was just as well that demands on the Department of Roads and Irrigation slowed during this period, because it faced staffing shortages. Many employees left for military service, while others were lured away by more lucrative jobs in the defense industry.[117]

As the war raged on, the department did what it could to prepare for post-war construction. Standardized plans were refined to be more easily adaptable to a variety of locations. New concrete slab plans, for example, covered bridges up to three spans, 40 to 120 feet in length, with straight orientation or having 15- and 30-degree skews. The department explained that "with the aid of this standard plan, a draftsman having a very limited knowledge of design will be able to prepare a plan for any particular bridge site, since all design computations involving stress analysis will be eliminated." Culvert plans were revised with the same goal. The department also, with encouragement from the federal government, planned a massive construction campaign for after the war, both to make up for lost time and to employ former military personnel.[118]

Although the department was prepared to let about $2 million in bridge and viaduct contracts when the war ended, it was frustrated by continued shortages, particularly of steel:

> **Up to the present time, more than a year after the cessation of hostilities, the material and equipment situation is more acute than at any time during the war. Due to this situation, it was impossible for the Department to carry on an extensive highway building program.... Due to the steel situation it was apparent that no major bridges or viaducts could be constructed during 1946.[119]**

Crossings in Johnson County were among those affected. The district engineer noted in his biennial report for 1945-46 that "due to the shortage of steel, it was necessary to defer the letting of contracts for two railroad grade separations, a bridge across the Nemaha River, and several smaller bridges." At least one of the railroad grade separations (JOHN16) and the Nemaha bridge (JOHN15), both on the south approach to Tecumseh, were finally completed by 1948.[120]

In some cases, construction simply could not be delayed. Douglas County began a 510-foot, cantilevered, deck plate-girder bridge near Elk River (DOUG12) in 1944 to replace another structure washed away by floods on the Elkhorn River. At about the same time, Dodge County started a 435-foot, five-span, continuous girder bridge at Nickerson. The latter was significant as "the first structure to be constructed with Federal-aid funds where welding was permitted in main stress carrying members." It was a pragmatic decision: use of welded connections was estimated to reduce the amount of steel required for the superstructure by twenty percent. Despite need and innovation, however, the projects were delayed. Late in 1945, the district engineer reported that "bridges over the Elkhorn at Nickerson and Elk City have been under construction for over a year, but due to shortage of materials neither structure has been completed."[121]

The state's construction program was further impeded by continued staffing troubles. The department promised to rehire employees who had gone off to war, but many failed to return "because of the fact that other fields have been able to offer more attractive positions from a remunerative standpoint." In response, the department set up its own engineer training program, in which 154 were enrolled in 1946.[122]

As in previous times of shortage, creativity was the order of the day. When a timber bridge over the Cedar River southeast of Belgrade washed out, it was replaced with a steel truss and I-beam approach spans salvaged from former bridges. Even the flooring was wood reclaimed from the old timber structure. Difficulty in replacing another bridge over the Cedar forced "the purchase by the State of a government surplus bridge in New Jersey, the shipping of it to our shop in Lincoln for some shop fitting and the delivery to the site."[123]

By the late 1940s, the country had recovered from the war. To a nation longing for security and prosperity, the suburban home became the ideal. Tract housing claimed corn fields and demanded roads which, when extended, spurred even further development. Within a decade, the interstate freeway system was conceived and under construction. As in past decades, bridge design continued to evolve as new technologies became available and as structural needs changed. Bridges built for primordial tractors and roadsters heroically stood the test of heavier vehicles, higher volume, and faster traffic, serving long past reasonable expectations. Their increasingly rapid replacement, however, has created an urgent need to record the survivors. From the humble concrete culverts over irrigation canals in the state's western counties to the complex trusses spanning the moody Missouri, these structures provide a tangible bridge between Nebraska's past and present.

ENDNOTES

1. Martin E. Carlson, "The Development of Irrigation in Nebraska" (Ph.D. thesis, University of Nebraska, 1963), p. 41.

2. Twain quoted in Nebraska Department of Public Works, Fifteenth Biennial Report, 1923-24, p. 164.

3. Weather statistics from Merlin P. Lawson, et al., Climatic Atlas of Nebraska (Lincoln: University of Nebraska Press, 1977), p. 46; bridge reconstruction records from John G. Mason, "A Report on Pile Foundations in Nebraska Highway Bridges" (Civil Engineer thesis, University of Nebraska, 1936), p. 7.

4. For information on steamboating, see James C. Olson, History of Nebraska (Lincoln: University of Nebraska Press, 1966), pp. 103-4.

5. De Smet quoted in Guy P. Dorsey, "Pioneer Highways and City Pavements," Part 1, Nebraska Blue Print, March 1931, p. 6; Olson, p. 54.

6. For information on early trails, see Olson, pp. 54-66, and Dorsey,"Pioneer Highways and City Pavements," Parts 1 and 2,Nebraska Blue Print, March (pp. 5+) and April (pp. 7+) 1931.

7. Harvey quoted in Dorsey, Part 1, p. 24; other information on route in Olson, pp. 106-07.

8. National Highway Users Conference, Military Roads: A Brief History of the Construction of Highways by the Military Establishment and a Gazetteer of the Military Roads in Continental United States (Washington, D.C.: n.p., 1935). According to historian Walker D. Wyman, "the government itself had constructed bridges over most of the streams except Loup Fork; "Omaha: Frontier Depot and Prodigy of Council Bluffs," Nebraska History Magazine 17 (July-September 1936): 148.

9. George E. Koster, "A Story of Highway Development in Nebraska," typescript, 1986, pp. 10-11; Olson, p. 87.

10. Everett Dick describes construction of a sod bridge in Conquering the Great American Desert: Nebraska (Lincoln: Nebraska Historical Society Press, 1975), p. 44:

> With the greatest of effort two trees were dragged to the stream and laid parallel from bank to bank about six feet apart. Poles were laid perpendicularly across these stringers at short intervals. This skeleton was then covered with brush and over the brush a thick layer of slough hay; over this a quantity of earth was spread. The passage of teams and wagons packed down the earth, and well-beaten tracks were formed across the causeway.

11. For bridge fund details, see George Johnson, "The Development of Nebraska Highways," Nebraska Blue Print, March 1922, p. 3. On Means, see Dorsey, Part 2, p. 8. The Old Grand Island Bridge is mentioned in Nebraska Department of Public Works, Monthly Report, October 1921, p. 3; the Central City Bridge in Monthly Report, February 1922, pp. 16-17. For 1881 flooding, see Dick, p. 260.

12. Quotes in Dorsey, Part 2, pp. 7-8. For information on John Burke, see Carlson, pp. 88-90.

13. Dorsey, Part 2, p. 8.

14. For an overview of truss bridges, see Donald C. Jackson, Great American Bridges and Dams (Washington, D.C.: Preservation Press, 1988), pp. 20-30; and J.A.L. Waddell, Bridge Engineering, vol. 1 (New York: John Wiley & Sons, 1916), pp. 18-22.

15. Waddell, 23-27; Jackson, pp. 28-29.

16. Dorsey, Part 2, pp. 7-8. For Beatrice bowstring, see Gage County Commissioners' Records, 6 October 1874, 7 February 1876, 15 July 1890, in Gage County Courthouse, Beatrice, Nebraska.

17. Jack Singleton, "Meeting Nebraska's Bridge Problems," Part 1, Nebraska Blue Print, October 1931, p. 35.

18. Daniel B. Luten, Engineering News 47 (17 April 1902): 304-5.

19. See Nebraska Historic Bridge Inventory Forms for Bridge Numbers C001200904, C001205005P, C004111015, C005516205, C005520840R, C006703505P, C007403205, C007914525, C008700620, C008703105P, and C00871161. These and all other Nebraska historic bridge inventory forms cited in this study are in the Nebraska Historical Society in Lincoln.

20. Mason, pp. 9-10.

21. Mason, p. 12; Singleton, pp. 35-50.

22. Waddell, pp. 27-28.

23. Ibid, p. 17; John W. Oliver, History of American Technology (New York: Ronald Press, 1975), pp. 314-29; H.R. Schubert, "The Steel Industry," in A History of Technology, vol. 5, Charles Singer, et al., eds. (New York and London: Oxford University Press, 1958): 53-71.

24. Victor C. Darnell, A Directory of American Bridge-Building Companies, Society for Industrial Archeology Occasional Publication, no. 4 (Washington, D.C.: Society for Industrial Archeology, 1984), pp. 17-18, 48, 50.

25. Darnell, pp. 85-86.

26. The Paxton and Vierling plant was moved to Carter Lake in 1940; company information in "Steel Plant in 75th Year," Sunday World-Herald, 2 October 1960, and David C. Beeder, "Steel Firm Marks 100th Year," World-Herald, 12 May 1985. Andrews Brothers is listed in Omaha City Directories, 1890-94, in Omaha Public Library. For information on Ward, see "Harvey T. Ward is Called," Tecumseh Chieftain, 13 February 1926; Dorsey, Part 2, pp. 7-8.

27. Ironically, Lincoln's "poor workmanship" has survived to this day; see Nebraska Historic Bridge Inventory, Bridge Number C001811505.

28. Drake's daughter Mary married Peter Kiewit, whose construction company had received half a billion dollars in federal highway construction contracts by the 1960s; the firm has also been involved in hydro-electric development in British Columbia, Minuteman missile site development, and several other massive projects. See Harold B. Meyers, "The Biggest Invisible Builder in the World," Fortune, April 1966, p. 147. Omaha Structural Steel Works, which was renamed Omsteel Industries, came into financial trouble in the late 1960s. For information on the company and on Towle, see Arthur C. Wakeley, ed., Omaha: The Gate City and Douglas County, Nebraska, vol. 2 (Chicago: S.J. Clarke Publishing Co., 1917), p. 225; Sara Mollin Baldwin and Robert Morton Baldwin, eds., Nebraskana (Hebron, Neb.: Baldwin Co., 1932), p. 1202; Vaughn Gaddis, "Omaha Steel Works," Nebraska Blue Print, March 1947, p. 139; Harold Levinger, "Omaha Steel," Nebraska Blue Print, October 1949, p. 6; "Omsteel Firm Once Enviable," World-Herald, 8 April 1973. Allied Contractors is listed Omaha city directories from 1920 to 1937.

29. Designs of Wrought Iron Bridges built by the Wrought Iron Bridge Co. of Canton, Ohio (Canton: Hartzell & Saxton, 1874), p. 18.

30. Nebraska State Board of Irrigation, Highways and Drainage, Tenth Biennial Report, 1912-14, p. 222.

31. Proceedings of the Clay County Commissioners: 29 March, 7 and 27 June, 1 and 29 August 1911; 10 January, 7 February, 12 March, 9 April 1912, in Clay County Courthouse, Clay Center, Nebraska. See also Nebraska Historic Bridge Inventory Form for Bridge Number C001812315.

32. See, for example, Charlene K. Roise and Frederic L. Quivik, "North Dakota's Historic Bridges," draft, 1990.

33. Proceedings of the County Commissioners, 3 October, 22 November 1906: Richardson County Courthouse, Falls City, Nebraska. Nebraska Historic Bridge Inventory Form for Bridge Number C007402810P.

34. Proceedings of the York County Supervisors: 9 February 1916: York County Courthouse, York, Nebraska.

35. Nebraska State Board of Irrigation, Ninth Biennial Report, 1910-12, p. 60; Nebraska State Board of Irrigation, Highways and Drainage, Tenth Biennial Report, 1912-14, p. 238.

36. Nebraska State Board of Irrigation, Ninth Biennial Report, 1910-12, p. 56.

37. Dorsey, Part 2, p. 21. Profile of Rosewater in Pen and Sunlight Sketches of Omaha and Environs (Chicago: Phoenix Publishing Co., 1892), p. 127. Rosewater was also involved with plans for a subway system in Washington, D.C., and was especially well known for his design of public works throughout the state and the nation: according to the article, he "has probably drawn up plans for the sewerage of more cities than any engineer west of Chicago." For Information on viaducts in general, see John Lethem, Historical and Descriptive Review of Omaha (Omaha: no pub., 1892), pp. 29-30; on the Sixteenth Street Viaduct, see Nebraska Historic Bridge Inventory Form for Bridge Number U1825J5505.

38. Lethem, pp. 29-30. The 1887-88 structure, later known as the Ak-Sar-Ben Bridge, was widened in 1924 by cutting the original truss in two and inserting a heavier truss in the middle; see "Widening the Missouri River Highway Bridge at Omaha," Engineering News-Record 94 (18 June 1925): 1006-10.

39. "Construction of Pivot Pier, Interstate Bridge, Omaha, Neb.," Engineering News 30 (23 November 1893): 410-12; "The 520-ft. Swing Span, Interstate Bridge, Omaha, Neb.," Engineering News 30 (7 December 1893): 448-49; "The Omaha Interstate Bridge," Engineering Record 47 (24 January 1903): 98-103. H.G. Schlitt, "Missouri

River Progress Report," typescript, 20 September 1945, in files of the Bridge Department, Nebraska Department of Roads, Lincoln, Nebraska.

40. Waddell, pp. 29-30.

41. Olson, pp. 68-77, 112-115.

42. Johnson, p. 1.

43. Waddell, p. 21. Singleton, p. 50.

44. Clayton B. Fraser, "Behemoths: The Great River Bridges of George S. Morison," Historic American Engineering Record report prepared for the Rocky Mountain Regional Office of the National Park Service, October 1986, p. 43; "The Erection of the Omaha Bridge," Engineering Record 38 (27 August 1898): 268-69.

45. Carl Condit, American Building (Chicago: University of Chicago Press, 1982), pp. 103-4.

46. "The Nebraska City Bridge," Engineering 59 (11 January 1895): 43. For information on Whipple trusses, see Condit, 98-99, Jackson, pp. 24-27, and Waddell, p. 23.

47. Condit, p. 104. It is interesting to note that when the 1885 bridge was replaced in 1916 by a still heavier structure of pin-connected Parker trusses, several of the old piers continued their patient service. For further information on the 1872, 1885, and 1917 Omaha bridges, see "Rebuilding the Missouri River Bridge of the Union Pacific R. R., Omaha, Nebraska," Railway Review 60 (10 February 1917): 191-94; and "Reconstruction of Union Pacific Railroad Bridge at Omaha," Engineering 103 (8 June 1917): 537-539.

48. Waddell, p. 25; "The Nebraska City Bridge," p. 43; "The Rulo Bridge," Railroad and Engineering Journal 61 (September 1887): 403-7; "The Blair Crossing Bridge," illustration in Engineering 44 (2 September 1887): 247.

49. "Rulo Bridge," pp. 403-7; Waddell, p. 29.

50. Donald D. Price, "Cement Plants and the Production of Portland Cement in Nebraska," Nebraska Blue Print, September 1931, p. 12.

51. H. J. Kesner, "Some Recent Missouri River Bridges," Nebraska Blue Print 28 (May 1929): 9; photo caption in Nebraska Department of Public Works, Fifteenth Biennial Report, 1923-24, p. 98.

52. For information on Office of Road Inquiry, see George E. Koster, p. 5. For details regarding the creation of the State Board of Irrigation, see its First Biennial Report, 1895-96.

53. Koster, p. 11. Nebraska State Board of Irrigation, Sixth Biennial Report, 1905-6, p. 11 and photograph opposite p. 11; Seventh Biennial Report, 1907-8, photographs opposite pp. 109, 183.

54. Koster, p. 13.

55. John Doyle, "Public Highway Administration in Nebraska," M.A. thesis, University of Nebraska, 1951, p. 52.

56. Aivars G. Ronis, "Nebraska State Aid Bridges, 1911-1936," report prepared for Nebraska Department of Roads, 1978; Nebraska State Board of Irrigation, Ninth Biennial Report, 1910-12, pp. 59-60.

57. Nebraska State Board of Irrigation, Ninth Biennial Report, 1910-12, pp. 58-59.

58. Nebraska State Board of Irrigation, Highways and Drainage, Tenth Biennial Report, 1912-14, pp. 220, 222-23, 232.

59. Koster, p. 7.

60. Fisher quote in Koster, p. 8; quote on Lincoln Highway route in Nebraska Department of Public Works, Monthly Report, September 1921, p. 7. A 4,580-foot section of the original Lincoln Highway in Douglas County, including an 81.5-foot, Pratt pony truss bridge, has been listed in the National Register of Historic Places. Due to rerouting of U.S. Highway 30, this section is now part of County Road 120. For further information in "Lincoln Highway Registration Form," nomination to National Register of Historic Places, in Nebraska State Historical Society, Lincoln. The Lincoln Highway, Meridian Road, and OLD Highway are mentioned in Nebraska State Board of Irrigation, Highways and Drainage, Tenth Biennial Report, 1912-14, p. 220-21; Nebraska Department of Public Works, Monthly Report, July 1922, p. 10.

61. Nebraska State Board of Irrigation, Highways and Drainage, Tenth Biennial Report, 1912-14, pp. 231-32.

62. For a general discussion of the development of concrete bridges in the United States, see Jeffrey A. Hess and Robert M. Frame, Wisconsin Stone-Arch and Concrete-Arch Bridges, Historic Highway Bridges in Wisconsin, vol. 1 (Wisconsin Department of Transportation, 1986).

63. Information on Nebraska's cement industry in Price, pp. 11.

64. Nebraska Department of Public Works, Monthly Report, October 1919, pp. 17-18; state engineer quote and information on cement industry in State Board of Irrigation, Highways and Drainage, Eleventh Biennial Report, 1915-16, pp. 373-75.

65. Nebraska Department of Public Works, Monthly Report, October 1919, pp. 17-18.

66. Waddell, p. 16; Nebraska Department of Public Works, Monthly Report, October 1919, p. 17.

67. Department of Public Works, Monthly Report, June 1920, p. 35.

68. Nebraska Department of Public Works, Fifteenth Biennial Report, 1923-24, p. 164. Transverse joist girder bridges will be discussed in a later section.

69. Proceedings of the Webster County Commissioners: 26 February, 5 March, 12 August 1913, in Webster County Courthouse, Red Cloud, Nebraska.

70. See Nebraska Historic Bridge Inventory Forms for the Onken Bridge, C006510245, and C007601725.

71. See Nebraska Historic Bridge Inventory Form for C004402805P.

72. Nebraska Department of Public Works, Fifteenth Biennial Report, 1923-24, p. 13-15.

73. Summary of federal aid in John Doyle, p. 62; quote from Nebraska Department of Public Works, Monthly Report, October 1922, p. 9.

74. Nebraska Department of Public Works, Monthly Report, June 1922, pp. 14-16; and Sixteenth Biennial Report, 1925-26, p. 154.

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76. Nebraska Department of Public Works, Thirteenth Biennial Report, 1919-20, pp. 535-40; and Monthly Report, January 1921, pp. 37-38.

77. Ibid.; Nebraska Department of Public Works, Monthly Report, February 1923, pp. 21-22; Nebraska Department of Roads, Twenty-first Biennial Report, 1935-36, p. 13.

78. Nebraska Department of Public Works, Monthly Report, June 1919.

79. Nebraska Department of Public Works, Sixteenth Biennial Report, 1925-26, p. 15; Seventeenth Biennial Report, 1927-28, p. 79.

80. Nebraska Department of Public Works, Fourteenth Biennial Report, 1921-22, p. 264; Seventeenth Biennial Report, 1927-28, pp. 81-82.

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83. Koster, p. 22; Nebraska Department of Roads and Irrigation, Twenty-second Biennial Report, 1937-38, pp. 24-25; and Twenty-third Biennial Report, 1939-40, p. iii, liii.

84. Nebraska Department of Public Works, Monthly Report, April 1920, p. 22.

85. See Nebraska Historic Bridge Inventory Form for C005520923.

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87. Johnson, p. 13.

88. Nebraska Department of Public Works, Eighteenth Biennial Report, 1929-30, p. 113.

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90. Clayton B. Fraser, "Abraham Lincoln Memorial Bridge," Historic American Engineering Record report prepared for Iowa Department of Transportation, June 1987, pp. 20, 22, 33; W.G. Hill, "The Lincoln Memorial Bridge," Nebraska Blue Print, March 1929, pp. 5-6.

91. Don Loutzenheizer, "The Waubonsie Bridge," Nebraska Blue Print, December 1930, p. 5; Levinger, p. 6.

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93. See Nebraska Historic Bridge Inventory Forms for S09207164, C003500105P, C003505305, and C004013705.

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97. Nebraska State Board of Irrigation, Highways and Drainage, Eleventh Biennial Report, 1915-16, pp. 452-533.

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99. Nebraska Department of Roads and Irrigation, Twentieth Biennial Report, 1933-34, pp. 44-46; Koster, 35-38.

100. Nebraska Department of Roads and Irrigation, Twenty-first Biennial Report, 1935-36, p. 75.

101. Ibid, p. 15.

102. Justin Nicolet, "Fifty-six Bridges to Span New Power Canal," Engineering News-Record 117 (6 August 1936): 181-85.

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104. Nebraska Department of Roads and Irrigation, Twentieth Biennial Report, 1933-34, p. 80; Twenty-first Biennial Report, 1935-36, pp. 119, 124; Twenty-second Biennial Report, 1937-38, p. 72.

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117. Nebraska Department of Roads and Irrigation, Twenty-fourth Biennial Report, 1941-42, pp. 6, 9, 109, 113.

118. Nebraska Department of Roads and Irrigation, Twenty-fifth Biennial Report, 1943-44, pp. 85-87.

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120. Ibid, p. 169.

121. Ibid, pp. 67, 171.

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123. Ibid, pp. 66-67, 175, 181-82.

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EVALUATION

The central feature of the bridge inventory is the evaluation of the individual structures for relative historical and/or technological significance. Within the context of the bridge building overview, each structure from the inventory is assessed for its representation of bridge industry trends. Because the inventory is intended as a cultural resource management document to be used in processes (bridge replacement and rehabilitation) which have federal involvement through the Federal Highway Administration, significance is therefore gauged by eligibility for the National Register of Historic Places. Its evaluation is guided generally by the standards outlined in 36 CFR Part 60.

These criteria have been written in purposefully vague terms, favoring the general over the specific, because they are aimed toward a broad range of sites and situations. The determination of eligibility for NRHP requires, in part, the application of three criteria (A fourth criterion - whether the resource has yielded, or is likely to yield, information important in prehistory or history - is applied principally to archeological properties and is not really germane to this discussion.) The NRHP criteria are applied to properties which may possess regional, statewide or national significance. Additionally, the evaluation questions whether the property has retained a sufficient integrity of location, design, setting, materials, workmanship, feeling and association. The criteria pertinent to bridge evaluation defined properties that are NRHP eligible as:

Criterion A: resources that are associated with events that have made a significant contribution to the broad patterns of our history.

Criterion B: resources that are associated with the lives of persons significant in our past.

Criterion C: resources that embody the distinctive characteristics of a type, period or method of construction, of that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction.

Applied liberally, Criterion A could be used to encompass virtually every bridge in Nebraska from the historical period as potentially eligible for NRHP, because almost every bridge is associated with the broad pattern of transportation. This is in turn integrally linked with the themes of development, commerce and settlement. Transportation has unquestionably made "a significant contribution to the broad patterns of our history." And as elements of nationwide roadway networks, bridges are representative resources which are important to the people that cross them, at least on a local level. Thus, all bridges are historically significant to the transportation theme on at least a local level. But to select all from an array of choices is not to select at all. To insert a degree of discrimination into this consideration with regard to bridges, Criterion A has traditionally been interpreted to mean structures which have been at least regionally important. The question to ask with regard to Criterion A is typically this: Has the bridge contributed in a meaningful way to the settlement

and development of a geographically definable area? Has the bridge facilitated major passage to or through a region, or has the access it has allowed created settlement and development of any sizeable district, region or portion of land?

Criterion C is the one under which the majority of bridges in America have been determined eligible for NRHP. Like Criterion A, bridges evaluated by the liberal use of Criterion C may all be considered significant, either as representative examples of relatively common structural types or as rare or unique examples of unusual or anachronistic bridge configurations. It can be said that all bridges "embody the distinctive characteristics of a type, period or method of construction." As a pragmatic matter, therefore, Criterion C is typically employed more restrictively to winnow the group of similar resources to a meaningful list. Rather that look simply to typicality or uniqueness as indicators of significance, evaluation under this criterion also depends on identifying aspects of the bridges which make them stand out among their groups (i.e., earliest or oldest examples of type, longest span, longest total length, unusual structural or architectural detailing, etc.). By selecting the superlative examples from the major structural categories, a list of truly important bridges can be gleaned from a large number of similar resources.

To aid with the assessment, a numerical rating system has been developed. Patterned after the previously developed systems of Virginia, Ohio and Colorado and fine-tuned during the course of the project, it assigns numerical values to the different aspects of significance as defined by the National Register. The rating divides into three essentially equal categories: level of documentation, technological significance and general significance. The first is documentation. With a maximum of 30 points assigned, it is considered to be an important quality, allowing the structure to be traced to a specific time, builder and place of origin. Documentation requires hard evidence in the form of primary source references to the bridge's construction or physical evidence - the most obvious form of which would be a builder's plate on the bridge itself. Construction dates for bridges not documented definitively have been estimated from NDOR files or comparison with similar documentable spans or standard designs. The components of documentation are construction date and builder, and assessment is biased toward older bridges and those erected by in-state contractors. When the construction date has been estimated, one-half value is given. No points are assigned to bridges for which the builder is unknown. Compilation of a list of documented structures forms a bridge chronology in the state, from which individual bridges may be evaluated and, if undocumented in this inventory, perhaps documented with future research. Because of this, a premium is placed on traceability of the bridges' origins. Following is the value assignment for the documentation category.

DOCUMENTATION (maximum 30 pints)

Date of Construction

Pre -1900	15
1900-1909	12
1910-1919	8
1920-1939	4
Post-1940	0

(Add 5 points for earliest documented example or significant later example of type. When date is estimated, one-half value is assigned)

Builder

Known, significant Nebraska builder	10
Known, significant out-of-state builder	8
Known, Nebraska builder	6
Known, out-of-state builder	4
Builder unknown	0

The second category is technological significance, with a maximum of 35 points assigned. In this, rarity of structural type, dimensions and detailing are considered. Multiple spans are given points as unusual applications of engineering achievement and community investment. Similarly, span length is considered, with the longest spans of like bridges given points as usually the most important investments from the communities which they serve and as indicators of higher technology. The longest span example of each structural type is assigned an additional 5 points.

One of the most important considerations for evaluation is the number of surviving examples of type in the state. On the assumption that rarity equates with significance, more points are assigned for unique or uncommon bridge configurations, less to commonly represented types. This bias helps to insure that examples from all of the engineering types in Nebraska be noted for preservation. Finally, special structural or architectural features are given consideration for technological or aesthetic notability. Following is the value assignment for technological significance:

TECHNOLOGICAL SIGNIFICANCE (maximum 35 points)

Number of Spans (point for each when 2 or more)	4 (max.)

Length of individual spans

Pratt through truss 120' or greater	3
Pratt through truss 140' or greater	5
Other through truss 140' or greater	3
Other through truss 160' or greater	5
Pony truss 60' or greater	3
Pony truss 80' or greater	5
Steel stringer/girder 40' or greater	3
Steel stringer/girder 60' or greater	5
Concrete arch 40' or greater	3
Concrete arch 60' or greater	5
Concrete slab/girder 40' or greater	5
Concrete slab/girder 60' or greater	3
Timber stringer 30' or greater	5

Geometry/configuration

1-2 surviving examples of type in Nebraska	15
3-4 surviving examples of type in Nebraska	10
5-10 surviving examples of type in Nebraska	6
11-20 surviving examples of type in Nebraska	4
Greater than 20 examples of type in Nebraska	0

Special Features

Patented features 2
Decorative or distinctive elements 2
Builder's or dedication plate 2

The third category - general significance - is weighted equally with technological significance, with a maximum total of 35 points. This category takes into consideration the integrity of the structure's setting, its historical significance and structural and locational integrity. Historical significance relates the bridge to broader settlement, government and transportation themes and rates something apart from its engineering merits. Structural integrity questions whether the bridge functions as originally intended or has been significantly altered through subsequent construction. Deck replacement in most cases is considered a maintenance procedure and not a structural alteration. Locational integrity looks at whether the bridge remains in its original setting or has been moved. Because some bridge superstructures are by nature moveable and relocation is a significant aspect of bridge history, moved spans are not heavily penalized in this rating. Following is the value assignment for the general significance category:

GENERAL SIGNIFICANCE (maximum 35 points)

Integrity of Setting

Excellent 5
Good 3
Fair 1
Poor or unknown 0

Historical Significance

National significance 20
State significance 15
Regional significance 10
Significance minimal or undetermined 0

Structural Integrity

Original super- and substructure intact 5
Superstructure intact and substructure altered 3
Superstructure altered or braced 1
Bridge substantially altered, damaged, widened or unknown 0

Locational Integrity

Original location 5
New location, moved pre-1945 3
New location, moved post-1945 or unknown 0

After the winnowing process through application of the numerical criteria, several bridges have emerged with similar - but not outstanding - significance. To address this, a three-tier system has been employed to describe the bridge's potential for NRHP eligibility. The categories are:

Category 1 (eligible): bridge which are unique or rare examples of technologically important types or have exceptional historical or representational value from larger bridge groups.

Category 2 (possibly eligible): bridges which are good early examples of their types or are notable variations from classical configurations; bridges which have some historical yet limited technological significance.

Category 3 (not eligible): bridges which are typical later examples of common structural types and which have minimal historical significance; bridges which have been substantially altered.

The distinction between Categories 1 and 2 becomes exceedingly fine at times when no clearcut examples emerged from a particular structural grouping. The cutoff between the possibly eligible bridges and those determined not eligible is more sharply defined. The numerical system ranges from 1 to 100, and the general cutoff guidelines have been set at:

60 - 100 points	Category 1 (eligible)
40 - 59 points	Category 2 (possibly eligible)
1 - 39 points	Category 3 (not eligible)

The rating system is not intended to be a hardline arbiter of importance, by rather a means to quantify an array of factors which contribute to relative significance. Some bridges have been up- or down-graded in categories, deviating from their numerical scores, based upon the consultants' judgement. Others have been included under Category 1 because they have previously been enrolled in or determined eligible for NRHP. On the following pages is a summary listing of the bridges included in the inventory.

SUMMARY LISTING Nebraska Historic Bridge Inventory

Inv.No.	NDOR No.	Structure Name	Date	Description	Rating	NRHP
Adams County						
ADAM01	C000100405	Big Blue River Bridge	c1925	1- 29' concrete filled spandrel arch	17	non-eligible
ADAM02	C000101410	Burlington Railroad Overpass	1937	1- 51' steel through plate girder	26	non-eligible
ADAM03	C000101910	Cottonwood Creek Bridge	1924	1- 50' concrete filled spandrel arch	26	non-eligible
ADAM04	C000102903	Little Blue River Bridge	1916-17	1- 80' pinned Pratt pony truss	38	non-eligible
ADAM05	NONE	Hastings Subway	1934	3- 42' welded steel continuous deck girder	61	eligible
ADAM06	NONE	Bridge	c1920	1- 16' concrete filled spandrel arch	12	non-eligible
Antelope County						
ANTE01	C000202705P	Merritt Bridge	1912	3- 60' pinned Pratt pony truss	37	non-eligible
ANTE02	C000202710P	Neligh Mill Bridge	1910	1-140' pinned Pratt through truss	50	potential
ANTE03	C000203305	Derry Bridge	1911	1- 50' pinned Pratt pony truss	35	non-eligible
ANTE04	C000204505	Ives Creek Bridge	c1910	1- 47' pinned Pratt half-hip pony truss	29	non-eligible
ANTE05	C000205610	Cedar Creek Bridge	1911	1- 40' pinned Pratt pony truss	33	non-eligible
ANTE06	C000212505	Bridge	1911	1- 30' pin/rigid Kingpost pony truss	55	potential
ANTE07	C000221305	Clearwater Creek Bridge	c1925	1-100' rigid Pratt pony truss	22	non-eligible
ANTE08	C000221910	Elkhorn River Bridge	1883	1- 98' bowstring through arch-truss	49	eligible
ANTE09	C000242110	Verdigris Creek Bridge	c1918	1- 30' rigid Kingpost pony truss	45	potential
Arthur County						
NONE						
Banner County						
NONE						
Blaine County						
NONE						
Boone County						
BOON01	C000600825	North Shell Creek Bridge	c1915	1- 75' pinned Pratt pony truss	28	non-eligible
BOON02	C000603405P	Beaver Creek Bridge	c1910	1- 70' pinned Pratt pony truss	32	non-eligible
BOON03	C000603905P	Beaver Creek Bridge	c1917	1- 60' pinned Pratt pony truss	34	non-eligible
BOON04	C000605005P	Cedar Rapids Bridge	1912	1-114' pin/rigid Pratt through truss	50	potential
BOON05	C000612020	Shell Creek Bridge	c1912	1- 60' pinned Pratt pony truss	34	non-eligible
BOON06	C000613930	Beaver Creek Bridge	c1917	1- 60' pinned Pratt pony truss	24	non-eligible
BOON07	C000614115	Beaver Creek Bridge	c1915	1- 70' pinned Pratt pony truss	32	non-eligible
BOON08	C000614120	Beaver Creek Bridge	c1925	1-100' rigid Pratt pony truss	22	non-eligible
BOON09	C000614720	Shell Creek Bridge	c1915	1- 70' pinned Pratt pony truss	34	non-eligible
BOON10	C000625420	Plum Creek Bridge	c1915	1- 50' pinned Pratt pony truss	31	non-eligible
Box Butte County						
NONE						

SUMMARY LISTING Nebraska Historic Bridge Inventory

Inv.No.	NDOR No.	Structure Name	Date	Description	Rating	NRHP
Boyd County						
BOYD01	C000800710	Smith Bridge	1924	1-140' pinned Pratt through truss	34	non-eligible
BOYD02	C000801605	Yocum Bridge	1928	1-150' pinned Pratt through truss	44	potential
BOYD03	C000802305P	Ponca Creek Bridge	c1915	1- 40' pinned Pratt pony truss	17	non-eligible
BOYD04	C000808105	Sedivy Bridge	1908	1- 80' pinned Pratt through truss	25	non-eligible
BOYD05	C000808705	Ponca Creek Bridge	1904	1- 48' pinned Pratt half-hip pony truss	43	potential
BOYD06	U1485F2405	Ponca Street Bridge	1912-13	1- 80' pinned Pratt through truss	27	non-eligible
Brown County						
BROW01	C000901705P	Norden Bridge	1916	1-175' pinned Parker through truss	40	potential
BROW02	C000913725	Meadville Bridge	1907-08	2- 96' pinned Pratt through truss	41	potential
Buffalo County						
BUFF01	C001002115	Stanley Bridge	1914	1- 50' pinned Pratt pony truss	33	non-eligible
BUFF02	C001002905	Bridge	1902	1- 33' pinned Pratt half-hip pony truss	40	potential
BUFF03	C001006525	Wood River Bridge	c1907	1- 80' pinned Pratt pony truss	24	non-eligible
BUFF04	C001006530	Brown Bridge	1916	1- 32' steel stringer	33	non-eligible
BUFF05	C001006550	Sweet Creek Bridge	c1925	1-100' rigid Pratt pony truss	22	non-eligible
BUFF06	C001012210	Wood River Bridge	c1930	1-100' rigid Pratt pony truss	22	non-eligible
BUFF07	C001021625	Sand Creek Bridge	1910	1- 23' steel stringer	31	non-eligible
BUFF08	C001023115	Wood River Bridge	c1907	1- 80' pinned Pratt pony truss	24	non-eligible
BUFF09	C001023605	Bridge	1918	1- 36' transverse joist deck girder	38	potential
BUFF10	C001023820	Wood River Bridge	1915	1- 60' pinned Pratt pony truss	36	non-eligible
BUFF11	C001030415	Mud Creek Bridge	c1925	1-100' rigid Pratt pony truss	20	non-eligible
BUFF12	C001034545	Sweetwater Mill Bridge	1909	1- 80' pinned Pratt pony truss	43	potential
BUFF13	C001040245	County Line Bridge	1914	1- 40' pinned Pratt pony truss	33	non-eligible
BUFF14	S002 32814	South Loup River Bridge	1938	3- 88' steel stringer	24	non-eligible
BUFF15	S002 33674	Sweet Creek Bridge	1939	9- 38' continuous concrete slab	24	non-eligible
BUFF16	S010 04736R	Kilgore Bridge	1915	3- 87' pin/rigid Pratt pony truss	61	eligible
Burt County						
BURT01	C001103110P	Silver Creek Bridge	c1920	1-100' rigid Pratt pony truss	32	non-eligible
BURT02	C001104305P	Bridge	c1910	1- 60' pinned Pratt half-hip pony truss	32	non-eligible
BURT03	C001111015	South Blackbird Creek Bridge	1916	1-100' pinned Pratt pony truss	33	non-eligible
BURT04	C001114405P	Bridge	c1910	1- 70' pinned Pratt pony truss	32	non-eligible
BURT05	C001134305	Silver Creek Bridge	1916	1-100' pinned Pratt pony truss	33	non-eligible
BURT06	S075 13280	Tekamah City Bridge	1934	1- 48' concrete rigid frame	51	potential
BURT07	U0700A3305	Broadway Bridge	c1920	1-100' rigid Pratt pony truss	30	non-eligible
Butler County						
BUTL01	C001200305P	Platte River Bridge	1891	1- 73' pinned Warren through truss	52	potential
BUTL02	C001200310P	Bridge	c1905	1- 50' pinned Pratt half-hip pony truss	20	non-eligible
BUTL03	C001200505	Big Blue River Bridge	c1905	1- 43' pinned Pratt half-hip pony truss	14	non-eligible
BUTL04	C001200905	Big Blue River Bridge	1897-98	1- 40' pinned Pratt truss leg bedstead	51	potential
BUTL05	C001202215	Bridge	c1905	1- 30' pinned Pratt half-hip pony truss	20	non-eligible

SUMMARY LISTING Nebraska Historic Bridge Inventory

Inv.No.	NDOR No.	Structure Name	Date	Description	Rating	NRHP
BULT06	C001202920	Bone Creek Bridge	c1905	1- 30' pinned Pratt half-hip pony truss	20	non-eligible
BULT07	C001202925	Bone Creek Bridge	c1905	1- 30' pinned Pratt half-hip pony truss	20	non-eligible
BUTL08	C001205005P	Bridge	c1900	1- 40' rigid Warren truss leg bedstead	41	potential
BUTL09	COO1205015	Bridge	c1905	1- 27' pinned Pratt half-hip pony truss	20	non-eligible
BUTL10	C001205835	Oak Creek Bridge	c1905	1- 50' pinned Pratt half-hip pony truss	20	non-eligible
BULT11	C001232413	Bridge	1904	1- 40' pinned Pratt half-hip pony truss	35	non-eligible
Cass County						
CASS01	C001300305	Bridge	c1910	1- 30' pinned Pratt half-hip pony truss	19	non-eligible
CASS02	C001302720	Bridge	c1900	1- 40' rigid Warren truss leg bedstead	35	non-eligible
CASS03	C001304115	Cedar Creek Bridge	c1910	1- 45' pinned Pratt half-hip pony truss	13	non-eligible
CASS04	C001304505	Weeping Water Creek Bridge	c1915	1 120' pinned Pratt through truss	19	non-eligible
CASS05	C001310805	Turkey Creek Bridge	c1900	1- 40' rigid Warren truss leg bedstead	35	non-eligible
CASS06	C001314125	Bridge	c1900	1- 50' rigid Warren truss leg bedstead	40	potential
CASS07	C001314705P	Bridge	c1910	1- 50' pinned Pratt half-hip pony truss	15	non-eligible
CASS08	S034 038208	Plattsmouth Bridge	1929	2-400' rigid cantilevered through truss	66	eligible
Cedar County						
CEDA01	C001402410P	Bow Creek Bridge	c1925	1-100' rigid Pratt pony truss	22	non-eligible
CEDA02	C001402415P	East Bow Creek Bridge	c1925	1-100' rigid Pratt pony truss	22	non-eligible
CEDA03	C001402805	Bow Creek Bridge	c1935	1-100' rigid Camelback pony truss	33	non-eligible
CEDA04	C001403110	Middle Logan Creek Bridge	c1910	1- 64' pinned Pratt pony truss	30	non-eligible
CEDA05	C001403120	Bridge	c1910	1- 40' pinned Pratt pony truss	34	non-eligible
CEDA06	C001403815	Bow Creek Bridge	c1935	1- 60' rigid Camelback pony truss	24	non-eligible
CEDA07	C001403835	Pearl Creek Bridge	c1935	1-100' rigid Camelback pony truss	33	non-eligible
CEDA08	C001410505P	Bridge	c1925	1- 44' pinned Pratt pony truss	29	non-eligible
CEDA09	C001411313	Pearl Creek Bridge	c1913	1- 50' pinned Pratt pony truss	31	non-eligible
CEDA10	C001411545	West Bow Creek Bridge	c1915	1-100' pinned Pratt pony truss	24	non-eligible
CEDA11	C001411615P	Ames Creek Bridge	c1910	1- 50' pinned Pratt pony truss	31	non-eligible
CEDA12	C001412215	West Bow Creek Bridge	c1930	1-110' rigid Pratt pony truss	27	non-eligible
CEDA13	C001413216	Bow Creek Bridge	c1935	1-100' rigid Camelback pony truss	33	non-eligible
CEDA14	C001413315	Perrin Creek Bridge	c1910	1- 40' pinned Pratt pony truss	31	non-eligible
CEDA15	C001413525	Perrin Creek Bridge	c1925	1- 40' pinned Pratt pony truss	29	non-eligible
CEDA16	C001416410	Logan Creek Bridge	c1905	1-100' pinned Pratt through truss	18	non-eligible
CEDA17	C001422005	Bow Creek Bridge	1914	1-175' pinned Parker through truss	45	potential
CEDA18	C001422935	Bow Creek Bridge	c1935	1-100' rigid Camelback pony truss	33	non-eligible
CEDA19	C001423615	Bridge	c1910	1- 50' pinned Pratt pony truss	31	non-eligible
CEDA20	C001424525	East Bow Creek Bridge	c1913	1- 45' pinned Pratt pony truss	31	non-eligible
CEDA21	C001424615	East Bow Creek Bridge	c1905	1- 50' pinned Pratt pony truss	20	non-eligible
CEDA22	C001433015	Bow Creek Bridge	c1920	1-140' pinned Pratt through truss	20	non-eligible
CEDA23	S081 21468	Meridian Bridge	1924	19-250' rigid Pratt vertical-lift through truss	76	eligible
Chase County						
NONE						

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Cherry County						
CHER01	C0E1601105P	Niobrara River	1916	1-100' pinned Pratt through truss	28	non-eligible
CHER02	C0E1603505P	Twin Bridge	1900	1- 34' pinned Pratt truss leg bedstead	41	potential
CHER03	C0E1603510P	Twin Bridge	1900	8- 16' steel stringer	42	potential
CHER04	C0E1605105	Jack Darr Bridge	1916	1-123' pinned Pratt through truss	48	potential
CHER05	C0E1606105P	Borman Bridge	1916	1-130' pinned Pratt through truss	48	potential
CHER06	C0E1631903P	Anderson Bridge	1913	1-100' pinned Pratt through truss	45	potential
CHER07	C0E1637705P	Berry State Aid Bridge	1920-21	1-152' rigid Pratt through truss	44	potential
CHER08	C001602605P	Rockford Bridge	1909	1- 84' pinned Pratt through truss	43	potential
CHER09	C001608705P	Galloway Bridge	1916	1- 98' pinned Pratt through truss	45	potential
CHER10	C001611605P	Bell Bridge	1903	1-147' pinned Pratt through truss	54	potential
CHER11	C001611805	Brewer Bridge	1899	1-150' pinned Pratt through truss	49	potential
CHER12	C001657705P	Boiling Springs Bridge	1912	1- 90' pinned Pratt through truss	43	potential
CHER13	S020 19981	Bryan Bridge	1931-32	3-145' pinned Pratt through truss	71	eligible
CHER14	S097 13350	Adamson Bridge	1916	6- 31' rigid Pratt deck truss	47	potential
CHER15	NONE	County Line Bridge	1916	1- 50' pinned Pratt through truss	44	potential
CHER16	NONE	Case Bridge	1906	2- 60' pinned Pratt half-hip pony truss	46	potential
Cheyenne County						
CHEY01	SS17A00030	Brownson Viaduct	1942	13-33' timber stringer trestle	47	potential
Clay County						
CLAY01	C001801010	Korgan Bridge	1915	1- 35' concrete filled spandrel arch	35	non-eligible
CLAY02	C001804205P	Pawnee Creek Bridge	1922	1- 46' concrete filled spandrel arch	30	non-eligible
CLAY03	C001804705	Little Sandy Creek Bridge	1922	1- 40' concrete filled spandrel arch	22	non-eligible
CLAY04	C001804915	Deering Bridge	1916	1- 50' concrete filled spandrel arch	38	potential
CLAY05	C001811505	Bishop Bridge	1916	1- 40' concrete filled spandrel arch	38	potential
CLAY06	C001811915	Hachtel Bridge	1922	1- 40' concrete filled spandrel arch	30	non-eligible
CLAY07	C001812315	Big Blue River Bridge	1911-12	1- 45' pinned Pratt pony truss	45	potential
CLAY08	C001813005	Nichol Bridge	1917	1- 20' concrete filled spandrel arch	24	non-eligible
CLAY09	C001814315	School Creek Bridge	1922	1- 40' concrete filled spandrel arch	30	non-eligible
CLAY10	C001814505	Donaghue Bridge	1915	1- 20' concrete slab	27	non-eligible
CLAY11	C001823605	Kruitzfield Bridge	1915	1- 36' concrete filled spandrel arch	29	non-eligible
CLAY12	NONE	Onken Bridge	1915	1- 17' concrete slab	33	non-eligible
Colfax County						
COLF01	C001900310	Shell Creek Bridge	c1915	1- 80' pinned Pratt pony truss	24	non-eligible
COLF02	C001922220	Maple Creek Bridge	c1910	1- 48' pinned Pratt half-hip pony truss	19	non-eligible
Cuming County						
CUMI01	C002001605	Plum Creek Bridge	c1910	1- 50' pinned Pratt half-hip pony truss	29	non-eligible
CUMI02	C002001815	Plum Creek Bridge	1915	1- 70' pin/rigid Pratt pony truss	36	non-eligible
CUMI03	C002001820	Bridge	c1915	1- 40' pin/rigid Pratt pony truss	29	non-eligible
CUMI04	C002001915	Rock Creek Bridge	c1905	1- 48' pinned Pratt half-hip pony truss	26	non-eligible
CUMI05	C002004510	Cuming Creek Bridge	1911	1- 60' pinned Pratt half-hip pony truss	36	non-eligible
CUMI06	C002011150	Plum Creek Bridge	c1920	1- 80' pinned Pratt pony truss	32	non-eligible

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CUMI07	C002011755	Plum Creek Bridge	c1915	1- 50' pin/rigid Pratt pony truss	29	non-eligible
CUMI08	C002014440	Cuming Creek Bridge	c1915	1- 70' pin/rigid Pratt pony truss	32	non-eligible
CUMI09	C002014535	Logan Creek Bridge	c1915	2- 70' pinned Pratt pony truss	25	non-eligible
CUMI10	C002022730	Plum Creek Bridge	1912	1- 70' pinned Pratt pony truss	34	non-eligible
CUMI11	C002024235	Willow Creek Bridge	c1910	1- 64' pinned Pratt half-hip pony truss	32	non-eligible
CUMI12	C002024320	Rattlesnake Creek Bridge	1903	1- 60' pinned Pratt half-hip pony truss	40	potential
Custer County						
CUST01	C002109305P	Mud Creek Bridge	c1911	1- 55' rigid Warren pony truss	42	potential
CUST02	C002121605P	Victoria Creek Bridge	1916	1- 50' rigid Warren pony truss	37	potential
CUST03	C002129710	Mud Creek Bridge	c1920	1- 80' rigid Warren pony truss	17	non-eligible
CUST04	C002147620P	Mud Creek Bridge	c1915	1- 50' pinned Pratt pony truss	29	non-eligible
CUST05	C002167205	John Ausberry Bridge	1916-17	1- 50' pinned Pratt pony truss	33	non-eligible
CUST06	C002176010	Mud Creek Bridge	c1911-17	1- 40' rigid Warren pony truss	33	non-eligible
CUST07	C0E2100110	Bridge	1934	1- 47' concrete slab	24	non-eligible
CUST08	U0075A9105	Ansley Dump Bridge	1912	1- 75' rigid Warren pony truss	32	non-eligible
CUST09	NONE	Sargent Bridge	1908	2-120' pinned Pratt through truss	60	eligible
Dakota County						
DAKO01	C00200905P	Simmons Bridge	1913	1- 50' pinned Pratt pony truss	27	non-eligible
DAKO02	C002201005P	Rasmussen Bridge	1914	1- 50' pinned Pratt pony truss	27	non-eligible
DAKO03	C002202605	Elk Creek Bridge	c1905	1- 50' pinned Pratt half-hip pony truss	26	non-eligible
DAKO04	C002203010	Johnson/Ronnfeldt Bridge	c1910	1- 40' pinned Pratt pony truss	25	non-eligible
DAKO05	C002203105	Virginia Hale Bridge	c1915	1- 60' pin/rigid Pratt pony truss	28	non-eligible
DAKO06	C002203405P	Wigle Creek Bridge	c1920	1- 66' pin/rigid Pratt pony truss	23	non-eligible
DAKO07	C002210810P	Elk Creek Bridge	c1925	1-100' rigid Pratt pony truss	33	non-eligible
DAKO08	C002211705P	Elk Creek Bridge	c1910	1- 60' pinned Pratt pony truss	28	non-eligible
DAKO09	C002212405P	Conway Bridge	c1910	1- 60' pinned Pratt pony truss	28	non-eligible
Dawes County						
DAWE01	SS23A00172	Whitney Bridge	1937	3- 80' steel cantilevered stringer	30	non-eligible
Dawson County						
NONE						
Deuel County						
NONE						
Dixon County						
DIXO01	C002600405	Lime Creek Bridge	c1920	1- 60' transverse joist through girder	32	non-eligible
DIXO02	C002600705	Logan Creek Bridge	1909	1- 70' pinned Pratt pony truss	36	non-eligible
DIXO03	C002601115	Logan Creek Bridge	c1920	1- 54' transverse joist through girder	20	non-eligible
DIXO04	C002601305P	Daily Branch Bridge	1911-12	1- 50' pinned Pratt half-hip pony truss	33	non-eligible
DIXO05	C002602410	Daily Branch Bridge	1914	1- 70' pinned Pratt pony truss	36	non-eligible
DIXO06	C002603105	Aowa Creek Bridge	1918	1- 60' pin/rigid Pratt pony truss	36	non-eligible
DIXO07	C002603805P	South Creek Bridge	c1920	1- 60' steel deck girder	8	non-eligible

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DIXO08	C002611125	Bridge	c1910	1- 60' pinned Pratt half-hip pony truss	29	non-eligible
DIXO09	C002613620P	Schram Bridge	1907	1- 70' pinned Pratt pony truss	38	non-eligible
DIXO10	C002620725	Daily Branch Bridge	c1910	1- 70' pinned Pratt pony truss	23	non-eligible
DIXO11	C002622325P	Aowa Creek Bridge	c1920	1- 60' transverse joist through girder	32	non-eligible
DIXO12	C002623815	Otter Creek Bridge	1906-07	1- 60' pinned Pratt pony truss	36	non-eligible
DIXO13	C002641530P	Powder Creek Bridge	c1918	1- 80' pin/rigid Pratt pony truss	34	non-eligible
DIXO14	C002642115	Powder Creek Bridge	c1915	1- 80' pin/rigid Pratt pony truss	34	non-eligible
Dodge County						
DODG01	C002703410	Fremont Ditch Bridge	1908	1- 60' pinned Pratt half-hip pony truss	43	potential
DODG02	C002740817	Logan Creek Bridge	c1910	1- 70' pinned Pratt pony truss	32	non-eligible
DODG03	S275 12587	Elkhorn River Bridge	1932	1-160' rigid Parker through truss	48	potential
DODG04	S275 15289	Fremont Viaduct	1936	13-65' steel stringer	46	potential
Douglas County						
DOUG01	C002801404P	Waterloo Bridge	1923	1-148' rigid Pratt through truss	34	non-eligible
DOUG02	C002801405P	Big Papillion Creek Bridge	1921	1-100' rigid Pratt pony truss	34	non-eligible
DOUG03	C002801525	Rawhide Creek Bridge	c1925	1- 40' steel through girder	17	non-eligible
DOUG04	C002801805	Bridge	1928	1- 24' steel stringer	29	non-eligible
DOUG05	C002802405P	Bridge	1917-18	1- 80' pinned Pratt pony truss	30	non-eligible
DOUG06	C002803005	Harrison Street Bridge	1932-33	1-100' rigid Pratt pony truss	24	non-eligible
DOUG07	C002813125	168th Street Bridge	1927	1-100' rigid Pratt pony truss	34	non-eligible
DOUG08	C002824105	108th Street Bridge	1915	1- 28' steel stringer	33	non-eligible
DOUG09	SL28B00163	Elkhorn River Bridge	1933-34	1-202' rigid Pratt through truss	44	potential
DOUG10	SL28B00317	Dodge Street Subway	1937	3- 35' concrete rigid frame	53	potential
DOUG11	S00637025	Saddle Creek Underpass	1934	1- 50' concrete rigid frame with stone facing	42	potential
DOUG12	S03600658	Elkhorn River Bridge	1944-45	3-130' steel cantilevered deck plate girder	28	non-eligible
DOUG13	S27519041	South Omaha Bridge	1933-35	2-525' continuous Warren through truss	73	eligible
DOUG14	U082501805P	Main Street Bridge	1915	1- 28' steel stringer	43	potential
DOUG15	U1825E5315	Dahlman Avenue Overpass	1907-08	1- 59' steel deck girder	50	potential
DOUG16	U182512605	O Street Viaduct	c1885	3-247' pinned Whipple through truss	46	potential
DOUG17	U1825J1605	Locust Street Viaduct	1916	30-100' steel through plate girder	38	non-eligible
DOUG18	U1825J5505	16th Street Viaduct	1900	30-85' steel deck plate girder	54	potential
DOUG19	U1825K2205	Ed Creighton Viaduct	1931	1-234' rigid Parker through truss	-	non-eligible
DOUG20	U1825N2010	Leavenworth Incline	1930	21-24' steel stringer ramp	31	non-eligible
DOUG21	U1825Q2005	Mason Street Ramp	1929	11-30' steel stringer	29	non-eligible
DOUG22	U1825Q5505	10th Street Viaduct	1890	31-75' steel deck plate girder	61	eligible
DOUG23	U182504305	96th Street Viaduct	1908	5- 57' steel through plate girder	41	potential
DOUG24	U182505315	36th Street Viaduct	1908	7-108' rigid Warren pony truss	60	eligible
DOUG25	U182505510	24th Street Viaduct	1901	2-148' pinned Pratt through truss	51	potential
DOUG26	U182552405	Bancroft Street Viaduct	1913	30-90' steel through and deck plate girders	41	potential
Dundy County						
DUND01	S061 00053	Benkelman Bridge	1939	5- 88' steel cantilevered stringer	42	non-eligible

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Fillmore County						
FILL01	C003000310	Gergen Bridge	1920	1- 25' concrete filled spandrel arch	21	non-eligible
FILL02	C003000405P	Bridge	1914	1- 40' pinned Pratt pony truss	33	non-eligible
FILL03	C003000505	Launstein Bridge	1919-20	1- 20' concrete filled spandrel arch	27	non-eligible
FILL04	C003000605	School Creek Bridge	1914	1- 60' pinned Pratt pony truss	36	non-eligible
FILL05	C003000615	Indian Creek Bridge	1919	1- 25' concrete spandrel arch	31	non-eligible
FILL06	C003000810	Bridge	c1920	1- 20' concrete filled spandrel arch	19	non-eligible
FILL07	C003000825	Thompson Bridge	1918	1- 25' concrete filled spandrel arch	25	non-eligible
FILL08	C003001125	Big Blue River Bridge	1918	1- 50' concrete filled spandrel arch	34	potential
FILL09	C003001320	Bridge	1926	1- 20' concrete filled spandrel arch	25	non-eligible
FILL10	C003001505	Bridge	1917	1- 20' concrete filled spandrel arch	25	non-eligible
FILL11	C003001705	Turkey Creek Bridge	1926	1- 45' concrete filled spandrel arch	15	non-eligible
FILL12	C003001710	Bridge	1923	1- 40' concrete filled spandrel arch	15	non-eligible
FILL13	C003002005	Bridge	c1920	1- 25' concrete filled spandrel arch	13	non-eligible
FILL14	C003002015	Bridge	1926	1- 20' concrete filled spandrel arch	15	non-eligible
FILL15	C003002320	Bridge	c1925	1- 21' concrete filled spandrel arch	13	non-eligible
FILL16	C003002330	Davis Bridge	1920	1- 30' concrete filled spandrel arch	15	non-eligible
FILL17	C003002405	Bridge	1922	1- 20' concrete filled spandrel arch	21	non-eligible
FILL18	C003002610	Kohler Bridge	1920	1- 25' concrete filled spandrel arch	27	non-eligible
FILL19	C003003030	Turkey Creek Bridge	1919	1- 40' concrete filled spandrel arch	28	non-eligible
FILL20	C003003505	Turkey Creek Bridge	1908	1- 50' pinned Pratt half-hip pony truss	35	non-eligible
FILL21	C003003610	Turkey Creek Bridge	1908	1- 40' pinned Pratt half-hip pony truss	26	non-eligible
FILL22	C003003710	Turkey Creek Bridge	1917	1- 40' concrete filled spandrel arch	34	non-eligible
FILL23	C003003805	Bridge	c1920	1- 20' concrete filled spandrel arch	17	non-eligible
FILL24	C003003810	Langhorst Bridge	1919	1- 20' concrete filled spandrel arch	25	non-eligible
FILL25	C003004215	Little Sandy Creek Bridge	1925	1- 20' concrete filled spandrel arch	15	non-eligible
FILL26	C003004305	Little Sandy Creek Bridge	1920	1- 30' concrete filled spandrel arch	21	non-eligible
FILL27	C003004318	Stoy Bridge	1916	1- 21' concrete filled spandrel arch	31	non-eligible
FILL28	C003004515	Bridge	1917	1- 20' concrete filled spandrel arch	31	non-eligible
FILL29	C003004520	Beckwar Bridge	1916	1- 30' concrete filled spandrel arch	31	non-eligible
FILL30	C003004525	Johnson Creek Bridge	1923	1- 20' concrete filled spandrel arch	13	non-eligible
FILL31	C003004625	Little Sandy Creek Bridge	1917	1- 40' concrete filled spandrel arch	28	non-eligible
FILL32	C003004825	Bridge	c1925	1- 28' steel stringer	17	non-eligible
FILL33	C003010920	Bridge	1917	1- 30' concrete filled spandrel arch	31	non-eligible
FILL34	C003011015	Johnson Creek Bridge	1919	1- 25' concrete filled spandrel arch	19	non-eligible
FILL35	C003011020	Johnson Creek Bridge	1918	1- 25' concrete filled spandrel arch	26	non-eligible
FILL36	C003012410	Turkey Creek Bridge	1919	1- 25' concrete filled spandrel arch	25	non-eligible
FILL37	C003012415	Bridge	1919	1- 20' concrete filled spandrel arch	25	non-eligible
FILL38	C003014925	Weber Bridge	1920	1- 30' concrete filled spandrel arch	21	non-eligible
FILL39	C003022725	Bridge	1917	1- 25' concrete filled spandrel arch	31	non-eligible
Franklin County						
FRAN01	C003103205	Turkey Creek Bridge	c1910	1- 60' pinned Pratt half-hip pony truss	22	non-eligible
FRAN02	C003104705	Republican River Bridge	1911	3-120' pinned Pratt through truss	59	potential
FRAN03	C003205505P	Lime Creek Bridge	c1925	1- 60' rigid Pratt pony truss	22	non-eligible

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FRAN04	C003110605P	Little Blue River Bridge	c1910	1- 36' pinned Pratt half-hip pony truss	19	non-eligible
FRAN05	C003114320P	Thompson Creek Bridge	c1925	1-100' rigid Pratt pony truss	27	non-eligible
FRAN06	S010 00548	Franklin Bridge	1932-35	3-100' rigid Warren pony truss	60	eligible
Frontier County						
FRON01	C003205505P	Lime Creek Bridge	c1905	1- 54' pinned Pratt half-hip pony truss	28	non-eligible
FRON02	C003206905P	Muddy Creek Bridge	1910	1- 60' pin/rigid Pratt pony truss	36	non-eligible
FRON03	C003217505	Bridge	c1915	1- 40' pin/rigid Pratt pony truss	27	non-eligible
FRON04	C003223403P	Mitchell Creek Bridge	c1905	1- 40' pinned Pratt half-hip pony truss	28	non-eligible
FRON05	C003223605	Bridge	c1915	1- 40' pin/rigid Pratt pony truss	27	non-eligible
FRON06	C003230425	Plum Creek Bridge	c1905	1- 40' pinned Pratt half-hip pony truss	28	non-eligible
FRON07	C003233405P	Muddy Creek Bridge	c1915	1- 60' pin/rigid Pratt pony truss	30	non-eligible
FRON08	C003233620	Muddy Creek Bridge	c1915	1- 50' pin/rigid Pratt pony truss	27	non-eligible
FRON09	C003243410	Elder Creek Bridge	c1915	1- 40' pin/rigid Pratt pony truss	27	non-eligible
FRON10	C003272030	Bridge	c1910	1- 50' pinned Pratt half-hip pony truss	27	non-eligible
FRON11	C003293010	Bridge	c1915	1- 40' pin/rigid Pratt pony truss	27	non-eligible
Furnas County						
FURN01	C00330605	Medicine Creek Bridge	c1910	1- 84' pinned Pratt through truss	20	non-eligible
FURN02	C003310105P	Medicine Creek Bridge	c1915	1-100' pinned Pratt through truss	20	non-eligible
FURN03	C003312915	Muddy Creek Bridge	c1930	2- 60' rigid Pratt pony truss	18	non-eligible
FURN04	C003320310	Medicine Creek Bridge	c1925	1-100' rigid Pratt pony truss	37	non-eligible
FURN05	C003321230	Dry Creek Bridge	1917	1- 50' pinned Pratt pony truss	35	non-eligible
FURN06	C003343815	Sappa Creek Bridge	c1920	1- 36' rigid Warren pony truss	11	non-eligible
FURN07	S046 00685	Oxford Bridge	1947-48	9- 86' steel cantilevered stringer	38	non-eligible
FURN08	S047 01247	Cambridge State Aid Bridge	1914	5- 64' concrete filled spandrel arch	68	eligible
FURN09	S089 04017	Beaver Creek Bridge	1941	5- 38' concrete rigid frame	28	non-eligible
Gage County						
GAGE01	C003400305	Turkey Creek Bridge	c1905	1- 80' pinned Pratt pony truss	25	non-eligible
GAGE02	C003400310	Big Indian Creek Bridge	1904	1- 40' rigid Warren pony truss	29	non-eligible
GAGE03	C003400425	Bridge	c1908	1- 30' rigid Warren pony truss	30	non-eligible
GAGE04	C003400610	Clatonia Creek Bridge	c1910	1- 44' pinned Pratt half-hip pony truss	27	non-eligible
GAGE05	C003400705	Bridge	c1910	1- 41' pinned Pratt half-hip pony truss	29	non-eligible
GAGE06	C003401105	Big Indian Creek Bridge	c1908	1- 60' pinned Pratt half-hip pony truss	22	non-eligible
GAGE07	C003401110	Ash Creek Bridge	c1910	1- 44' pinned Pratt half-hip pony truss	29	non-eligible
GAGE08	C003401710	Big Indian Creek Bridge	c1908	1- 40' rigid Warren pony truss	25	non-eligible
GAGE09	C003401805	Clatonia Creek Bridge	1900	1- 40' rigid Warren pony truss	29	non-eligible
GAGE10	C003401850	Hooker Creek Bridge	1911(?)	1- 40' pinned Pratt half-hip pony truss	33	non-eligible
GAGE11	C003402055	Bear Creek Bridge	c1905	1- 30' rigid Warren pony truss	30	non-eligible
GAGE12	C003402215	Snake Creek Bridge	c1900	1- 30' rigid Warren pony truss	20	non-eligible
GAGE13	C003402605	Bridge	1909	1- 30' rigid Warren pony truss	35	non-eligible
GAGE14	C003403115	Bridge	c1900	1- 23' rigid Warren pony truss	20	non-eligible
GAGE15	C003403120	Bridge	c1910	1- 60' pinned Pratt half-hip pony truss	32	non-eligible
GAGE16	C003403905	Mission Creek Bridge	c1900	1- 60' rigid Warren pony truss	20	non-eligible
GAGE17	C003404010	Bridge	c1910	1- 30' pinned Pratt half-hip pony truss	27	non-eligible

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GAGE18	C003404115	Arkeketa Creek Bridge	c1910	1- 54' pinned Pratt half-hip pony truss	29	non-eligible
GAGE19	C003404905	Mission Creek Bridge	1898	1- 42' rigid Warren pony truss	43	non-eligible
GAGE20	C003405405	Elm Creek Bridge	c1900	1- 30' rigid Warren pony truss	20	non-eligible
GAGE21	C003405410	Sicily Creek Bridge	c1915	1- 80' pinned Pratt pony truss	24	non-eligible
GAGE22	C003407015	Bridge	1909(?)	1- 30' rigid Warren pony truss	35	non-eligible
GAGE23	C003407020	Bridge	c1910	1- 70' pinned Pratt half-hip pony truss	29	non-eligible
GAGE24	C003407215	Bridge	c1905	1- 30' rigid Warren pony truss	20	non-eligible
GAGE25	C003407410	Bridge	c1900	1- 30' rigid Warren pony truss	20	non-eligible
GAGE26	C003411225	Indian Creek Bridge	1899	1- 30' rigid Warren pony truss	34	non-eligible
GAGE27	C003411503	Bridge	1898	1- 30' rigid Warren pony truss	43	eligible
GAGE28	C003412105	Big Indian Creek Bridge	1903	1- 60' rigid Warren pony truss	39	eligible
GAGE29	C003413925	Bloody Run Bridge	1898	1- 30' rigid Warren pony truss	43	eligible
GAGE30	C003414220	Mud Creek Bridge	c1910	1- 54' pinned Pratt half-hip pony truss	29	non-eligible
GAGE31	C003414740	Hooker Creek Bridge	c1915	1-100' pinned Pratt pony truss	24	non-eligible
GAGE32	C003415215	Bills Creek Bridge	1899	1- 30' rigid Warren pony truss	34	non-eligible
GAGE33	C003415620	Wildcat Creek Bridge	c1910	1- 54' pinned Pratt half-hip pony truss	29	non-eligible
GAGE34	C003421135	Snake Creek Bridge	1910(?)	1- 40' rigid Warren pony truss	33	non-eligible
GAGE35	C003423315	Bridge	c1900	1- 27' pinned Pratt half-hip pony truss	20	non-eligible
GAGE36	C003423320	Bridge	1900	1- 30' rigid Warren pony truss	29	non-eligible
GAGE37	C003423325	Bloody Run Creek	c1910	1- 60' pinned Pratt half-hip pony truss	32	non-eligible
GAGE38	C003437430	Mission Creek Bridge	1899	1- 30' rigid Warren pony truss	25	non-eligible
GAGE39	NONE	DeWitt Mill Bridge	1887	1-150' pinned Pratt through truss	60	eligible
GAGE40	NONE	Hoyt Street Bridge	c1870	1-140' bowstring through arch-truss	66	eligible
Garden County						
GARD01	C003500105P	Lisco State Aid Bridge	1927-28	8- 80' rigid Pratt pony truss	58	potential
GARD02	C003505305P	Lewellen State Aid Bridge	1926-27	7-100' rigid Pratt pony truss	58	potential
GARD03	S026 11926	North Platte River Bridge	1939-40	9- 50' steel cantilevered stringer	34	non-eligible
GARD04	S026 11954	North Platte River Bridge	1939-40	7- 50' steel cantilevered stringer	34	non-eligible
Garfield County						
GARF01	S011 09274	Burwell Bridge	1940-41	3-110' steel cantilevered stringer	40	potential
Gosper County						
GOSP01	C003701305	Muddy Creek Bridge	1916	1- 85' pinned Pratt pony truss	38	non-eligible
GOSP02	C003702505	Bridge	1916	1- 55' pinned Pratt pony truss	31	non-eligible
GOSP03	C003703620	Elk Creek Bridge	c1915	1- 60' pinned Pratt pony truss	22	non-eligible
GOSP04	C003704605P	Elk Creek Bridge	1915	1- 40' pinned Pratt pony truss	29	non-eligible
GOSP05	C003714620	Muddy Creek Bridge	1916	1- 40' pinned Pratt pony truss	31	non-eligible
GOSP06	C003714805	Muddy Creek Bridge	1916	1- 90' pinned Pratt pony truss	38	non-eligible
GOSP07	C003723815	Bridge	1911	1- 40' pinned Pratt pony truss	31	non-eligible
GOSP08	S283 05035	Tri-County Supply Canal Br.	1938	3- 95' steel cantilevered stringer	27	non-eligible
Grant County						
NONE						

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Greeley County						
NONE						
Hall County						
HALL01	C004013705P	Platte River Bridge	1924	6-100' rigid Pratt pony truss	46	potential
HALL02	NONE	Nine Bridges Bridge	1913	3- 60' pinned Pratt half-hip pony truss	64	potential
Hamilton County						
HAMI01	C004101505P	Chapman State Aid Bridge	1932	14- 72' steel cantilevered stringer	29	non-eligible
HAMI02	C004104310	Big Blue River Bridge	c1910	1- 60' pinned Pratt half-hip pony truss	8	non-eligible
HAMI03	C004114110	Beaver Creek Bridge	c1915	1- 40' pin/rigid Pratt pony truss	19	non-eligible
HAMI04	S034 24769	Aurora Viaduct	1936	3-125' steel through girder	49	potential
Harlan County						
HARL01	C004200510	Sappa Creek Bridge	c1915	1- 90' rigid Camelback pony truss	19	non-eligible
HARL02	C004200905	Sappa Creek Bridge	1916	1- 62' rigid Pratt pony truss	44	potential
HARL03	C004201505	Bridge	c1920	1-130' pinned Pratt through truss	13	non-eligible
HARL04	C004201620	Foster Creek Bridge	c1910	1- 28' rigid Pratt half-hip pony truss	21	non-eligible
HARL05	C004201705	Prairie Dog Creek Bridge	1913	1- 80' rigid Camelback pony truss	47	potential
HARL06	C004211015	Turkey Creek Bridge	1899	1- 46' pinned Pratt truss leg bedstead	46	potential
HARL07	C004214505	Turkey Creek Bridge	c1910	1- 46' pinned Pratt half-hip pony truss	17	non-eligible
HARL08	C004223310	Carlson Bridge	1906	1- 46' pinned Pratt half-hip pony truss	35	non-eligible
HARL09	C004233825	Hickman Creek Bridge	1908	1- 35' rigid Pratt half-hip pony truss	40	potential
HARL10	S089 05962	Republican River Bridge	1935	2-140' rigid Parker through truss	38	non-eligible
HARL11	S089 06062	Milrose Creek Bridge	c1935	13- 38' continuous concrete slab	15	non-eligible
HARL12	U185513203P	Orleans Bridge	1923	1- 40' concrete deck girder	24	non-eligible
Hayes County						
NONE						
Hitchcock County						
HITCH01	C004402805P	Bridge	1908	1- 20' concrete slab	38	potential
Holt County						
HOLT01	C004521725	Grand Rapids State Aid Br.	1931	7- 50' transverse joist through girder	51	potential
Hooker County						
HOOK01	C004614905	Middle Loup River Bridge	c1905	1- 60' pinned Pratt half-hip pony truss	17	non-eligible
HOOK02	C004605705P	West Seneca Bridge	c1910	1- 50' pinned Pratt pony truss	29	non-eligible
Howard County						
HOWA01	C004700115	Oak Creek Bridge	c1915	1- 70' pin/rigid Pratt pony truss	22	non-eligible
HOWA02	C004700305P	Boelus State Aid Bridge	1926-27	6- 60' transverse joist through girder	53	potential
HOWA03	C004701410P	Bridge	1915	1- 60' pin/rigid Pratt pony truss	34	non-eligible
HOWA04	C004701605	Bridge	1967	1- 55' steel plate deck girder	27	non-eligible

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Inv.No.	NDOR No.	Structure Name	Date	Description	Rating	NRHP
HOWA05	S011 02748	Middle Loup River Bridge	1934	7-115' steel continuous stringer	49	eligible
HOWA06	U0665E2105	Mill Street Bridge	1913-14	1- 70' pinned Pratt pony truss	18	non-eligible
Jefferson County						
JEFF01	C004801105	Culvert	c1935	3- 8' stone arch culvert	21	non-eligible
JEFF02	C004801115	Rose Creek Bridge	c1915	2- 80' pin/rigid Pratt pony truss	36	non-eligible
JEFF03	C004803325	Culvert	c1935	2- 12' steel multiplate arch culvert	19	non-eligible
JEFF04	C004804005P	Rose Creek Bridge	c1908	1- 90' pinned Pratt through truss	35	potential
JEFF05	C004810420	Culvert	c1935	2- 12' steel multiplate arch	19	non-eligible
JEFF06	C004813110	Elm Creek Bridge	unk.	2- 12' concrete slab	12	non-eligible
JEFF07	C004813425	Indian Creek Bridge	c1915	1-110' pin/rigid Pratt pony truss	39	potential
JEFF08	C004814405P	Little Blue River Bridge	1893?	2-105' pinned Pratt through truss	21	non-eligible
JEFF09	C004821525	Culvert	1938	8- 8' stone arch culvert	18	non-eligible
JEFF10	C004823715	Cub Creek Bridge	c1905	1- 60' pinned Pratt half-hip pony truss	19	non-eligible
JEFF11	C004832310	Bridge	c1905	1- 40' pinned Pratt half-hip pony truss	19	non-eligible
JEFF12	S015 00903	Fairbury Viaduct	1938-39	9-102' steel cantilevered stringer	48	potential
JEFF13	S136 15681	Jansen Viaduct	1936	9- 80' steel through girder	40	potential
Johnson County						
JOHN01	C004902215	Yankee Creek Bridge	c1915	1-125' pinned Pratt through truss	18	non-eligible
JOHN02	C004902530	Big Nemaha River Bridge	c1915	1- 90' pinned Pratt pony truss	30	non-eligible
JOHN03	C00490920	Big Nemaha River Bridge	c1915	2-100' pinned Pratt through truss	27	non-eligible
JOHN04	C004903205P	Big Nemaha River Bridge	c1895	1-136' pinned Pratt through truss	15	non-eligible
JOHN05	C004910505	Hooker Creek Bridge	c1910	1- 40' pinned Pratt half-hip pony truss	25	non-eligible
JOHN06	C004910915P	Big Nemaha River Bridge	c1935	1- 84' rigid Camelback pony truss	14	non-eligible
JOHN07	C004910925	Big Nemaha River Bridge	1950	1-160' rigid Parker through truss	24	non-eligible
JOHN08	C004911105	Lost Branch Bridge	c1910	1- 40' pinned Pratt half-hip pony truss	25	non-eligible
JOHN09	C004911815	Deer Creek Bridge	c1910	1- 50' pinned Pratt half-hip pony truss	25	non-eligible
JOHN10	C004913320	Little Nemaha River Bridge	c1910	1- 90' pinned Pratt through truss	28	non-eligible
JOHN11	C004913710	Keim Stone Arch Bridge	1916	1- 28' stone arch	44	potentially
JOHN12	C004913715	Mann's Branch Bridge	c1935	3- 32' steel stringer	18	non-eligible
JOHN13	C004941440	Spring Creek Bridge	c1910	1- 45' pinned Pratt half-hip pony truss	25	non-eligible
JOHN14	C004941620	Spring Creek Bridge	c1910	1- 43' pinned Pratt half-hip pony truss	25	non-eligible
JOHN15	S050 03135	Big Nemaha River Bridge	1947	3-104' steel cantilevered stringer	39	non-eligible
JOHN16	S050 03168	Tecumseh Viaduct	1947-48	5- 48' continuous concrete stab	38	non-eligible
JOHN17	U2415F2205	Lincoln Street Bridge	c1910	1- 24' concrete filled spandrel arch	15	non-eligible
JOHN18	NONE	Culvert	c1910	1- 10' concrete arch culvert	15	non-eligible
Kearney County						
NONE						
Keith County						
KEIT01	SL51A00068	Brule State Aid Bridge	1934-35	11-85' steel cantilevered stringer	39	non-eligible
KEIT02	SL51B00074	Roscoe State Aid Bridge	1934-35	7- 86' steel cantilevered stringer	44	eligible

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Keya Paha County						
KEYA01	C005201505P	Middle Creek Bridge	c1915	1- 50' pin/rigid Pratt pony truss	27	non-eligible
KEYA02	C005203805P	Thomas Creek Bridge	c1910	1- 35' pinned Pratt pony truss	19	non-eligible
KEYA03	C005205705P	Lewis Bridge	1922	2- 60' pinned Pratt pony truss	39	non-eligible
KEYA04	C005213410	Bridge	c1905	1- 40' pinned Pratt half-hip pony truss	28	non-eligible
KEYA05	C005216705	Burton Bridge	1912	1-140' pinned Pratt through truss	46	potential
Kimball County						
NONE						
Knox County						
KNOX01	C005400915	Verdigris Creek Bridge	c1930	1-100' rigid Pratt pony truss	16	non-eligible
KNOX02	C005401010P	Ponca Creek Bridge	c1920	1- 80' pin/rigid Pratt pony truss	24	non-eligible
KNOX03	C005401605P	Squaw Creek Bridge	c1920	1- 60' rigid Warren pony truss	15	non-eligible
KNOX04	C005401715	Verdigris Creek Bridge	c1920	1-150' rigid Parker through truss	26	non-eligible
KNOX05	C005401905P	Bridge	c1946	1- 70' Bailey deck truss	23	non-eligible
KNOX06	C005402205P	Pischel Creek Bridge	c1905	1- 40' pinned Pratt half-hip pony truss	20	non-eligible
KNOX07	C005402610P	Howe Creek Bridge	c1920	2-100' rigid Camelback pony truss	35	non-eligible
KNOX08	C005403805P	Verdigre Bridge	c1910	1-160' pinned Parker through truss	38	eligible
KNOX09	C005403915P	Bazile Creek Bridge	c1930	1-100' rigid Pratt pony truss	27	non-eligible
KNOX10	C005404120P	Bazile Creek Bridge	c1915	3- 70' pinned Pratt pony truss	18	non-eligible
KNOX11	C005405010	Verdigris Creek Bridge	c1910	1- 40' rigid Warren pony truss	35	non-eligible
KNOX12	C005405705	Bridge	c1925	1- 40' rigid Pratt pony truss	17	non-eligible
KNOX13	C005405810	Verdigris Creek Bridge	1936	3- 80' steel cantilevered stringer	27	non-eligible
KNOX14	C005413205	Gross State Aid Bridge	1918	1-180' pinned Parker through truss	59	potentially
KNOX15	C005415305	Little Bazile Creek Bridge	c1925	1-100' rigid Pratt pony truss	27	non-eligible
KNOX16	C005416205	Verdigris Creek Bridge	c1925	2- 65' rigid Pratt pony truss	12	non-eligible
KNOX17	C005431825	Bridge	c1935	1- 40' steel deck girder	17	non-eligible
KNOX18	C005435915	Bridge	1939	1- 79' steel deck girder	24	non-eligible
KNOX19	C005444610	Little Bazile Creek Bridge	1914	2- 60' pinned Pratt half-hip pony truss	20	non-eligible
KNOX20	C005463020	Howe Creek Bridge	c1920	1-160' pinned Pratt through truss	25	non-eligible
Lancaster County						
LANC01	C005501105	Olive Branch Bridge	c1930	1-100' rigid Pratt pony truss	17	non-eligible
LANC02	C005501910	Salt Creek Bridge	1926	1-100' rigid Pratt pony truss	30	non-eligible
LANC03	C005502305	Big Nemaha River Bridge	1919	1- 20' concrete slab	31	non-eligible
LANC04	C005504735	Bridge	1940-41	1- 23' steel stringer	23	non-eligible
LANC05	C005506805	Bridge	1940	1- 23' steel stringer	23	non-eligible
LANC06	C005513125	Rock Creek Bridge	c1920	1- 90' pin/rigid Pratt pony truss	9	non-eligible
LANC07	C005513350	Rock Creek Bridge	1978	1- 80' rigid polygonal Warren pony truss	32	non-eligible
LANC08	C005513605	Bridge	1941	1- 30' concrete filled spandrel arch	21	non-eligible
LANC09	C005513920	Bridge	1920	1- 20' concrete slab	27	non-eligible
LANC10	C005514020	Beal Slough Bridge	1937	1- 40' concrete rigid frame	46	potential
LANC11	C005516205	Olive Branch Bridge	1897	1- 40' pin/rigid Warren truss leg bedstead	53	potential
LANC12	C005520720	Middle Creek Bridge	c1925	1-100' rigid Pratt pony truss	10	non-eligible

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Inv.No.	NDOR No.	Structure Name	Date	Description	Rating	NRHP
LANC13	C005520840R	Millville Creek Bridge	c1900	1- 35' pin/rigid Warren truss leg bedstead	35	non-eligible
LANC14	C005520923	Bridge	1921	3- 81' steel plate deck girder	27	non-eligible
LANC15	C005523745	Rock Creek Bridge	1978-79	1- 80' rigid polygonal Warren pony truss	32	non-eligible
LANC16	SS55G00152	Bridge	1938	1- 25' stone arch	23	eligible
LANC17	U142503605	Salt Creek Bridge	1946	3- 70' concrete contlnous stringer	29	non-eligible
LANC18	U142512130P	Tenth Street Viaduct	1910	19-121' steel plate through girder	56	eligible
Lincoln County						
LINC01	C005602205	Birdwood Creek Bridge	1923	1- 60' steel transverse joist through girder	32	non-eligible
LINC02	C005609405	Curtis Creek Bridge	c1925	1- 23' concrete filled spandrel arch	19	non-eligible
LINC03	C005612930	Hershey State Aid Bridge	1927-28	9- 50' steel transverse joist through girder	62	eligible
LINC03	C005612935	Hershey State Aid Bridge	1927-28	5- 50' steel transverse joist through girder	62	eligible
LINC04	C005661710	Sutherland State Aid Bridge	1914-15	14- 50' concrete filled spandrel arch	72	eligible
LINC05	SL56D00147	Brady State Aid Bridge	1924-25	6- 63' steel stringer	29	non-eligible
Logan County						
NONE						
Loup County						
NONE						
Madison County						
MADI01	C005900805	Dry Creek Bridge	1914	1- 31' steel stringer	33	non-eligible
MADI02	C005903305	Union Creek Bridge	1914	1- 60' pinned Pratt pony truss	36	non-eligible
MADI03	C005904315	Union Creek Bridge	c1915	1- 60' pin/rigid Pratt pony truss	32	non-eligible
MADI04	C005904505P	Union Creek Bridge	1912	1- 90' pinned Pratt through truss	35	non-eligible
MADI05	C005904605	Texley Bridge	1909	1- 50' pin/rigid Pratt pony truss	35	non-eligible
MADI06	C005940615	Elkhorn River Bridge	1906	1- 70' pinned Pratt pony truss	40	potential
McPherson County						
NONE						
Merrick County						
MERR01	C006103110	Prairie Creek Bridge	1915	1- 80' pinned Pratt pony truss	25	non-eligible
MERR02	C006104405	Prairie Creek Bridge	c1912	1- 60' pinned Pratt pony truss	25	non-eligible
MERR03	C006112305	Warm Slough Bridge	c1912	1- 60' pinned Pratt pony truss	25	non-eligible
MERR04	C006116405	Wood River Bridge	c1912	1- 80' pinned Pratt pony truss	25	non-eligible
MERR05	S014 07891	Central City State Aid Bridge	1919	16- 50' concrete filled spandrel arch	61	eligible
MERR06	S092 38092	Clarks Viaduct	1940	1- 95' steel plate deck girder	20	non-eligible
MERR07	S092 38367	Clarks State Aid Bridge	1929-30	10- 50' steel stringer	34	non-eligible
MERR07	S092 38387	Clarks State Aid Bridge	1929-30	9- 50' steel stringer	34	non-eligible
MERR07	S092 38425	Clarks State Aid Bridge	1929-30	1- 50' steel stringer	34	non-eligible
Morrill County						
MORR01	S092 07164	Broadwater Bridge	1924-25	7-100' rigid Pratt pony truss	68	eligible
MORR02	S026 08281	U.S. Highway 26 Culvert	1940	11- 8' concrete box culvert	25	non-eligible

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Nance County						
NONE						
Nemaha County						
NEMA01	C006401105P	Brock Bridge	c1920	1-120' rigid Pratt through truss	20	non-eligible
NEMA02	C006401210	Bridge	c1920	1- 50' rigid Warren pony truss	17	non-eligible
NEMA03	C006401305	Bridge	c1910	1- 60' pinned Pratt pony truss	18	non-eligible
NEMA04	C006402703	Hughes Creek Bridge	c1900	1- 40' pinned Pratt half-hip pony truss	18	non-eligible
NEMA05	C006402805	Bridge	c1925	1- 50' rigid Pratt pony truss	19	non-eligible
NEMA06	C006402810	Bridge	c1925	1- 44' steel transverse joist girder	16	non-eligible
NEMA07	C006402815	Bridge	c1925	1- 60' rigid Pratt pony truss	20	non-eligible
NEMA08	C006403403P	Muddy Creek Bridge	c1920	1-120' rigid Pratt through truss	20	non-eligible
NEMA09	C006403640	Culvert	c1933-42	2- 10' stone arch culvert	31	non-eligible
NEMA10	C006410320	Bridge	c1935	2- 32' steel stringer	19	non-eligible
NEMA11	C006411250	Honey Creek Bridge	c1900	1- 90' pinned Warren through truss	45	potential
NEMA12	C006411310	Muddy Creek Bridge	c1910	1- 90' pinned Pratt pony truss	20	non-eligible
NEMA13	C006413035	Muddy Creek Bridge	c1935	1-100' rigid Pratt pony truss	22	non-eligible
NEMA14	C006413305	Little Nemaha River Bridge	c1920	1-120' rigid Pratt through truss	16	non-eligible
NEMA15	C006423445	Whiskey Run Bridge	c1905	1- 40' pinned Pratt pony truss	24	non-eligible
NEMA16	C006432635	Little Nemaha River Bridge	c1915	1-120' pinned Pratt through truss	20	non-eligible
NEMA17	S136 24018	Brownville Bridge	1939	2-420' rigid Warren cantilever through truss	70	eligible
NEMA18	NONE	Culvert	c1933-42	3- 6' stone arch culvert	22	non-eligible
Nuckolls County						
NUCK01	C006504525	Little Blue River Bridge	c1926	1-100' rigid Pratt pony truss	22	non-eligible
NUCK02	C006510245	Stewart Bridge	1915	1- 45' concrete filled spandrel arch	40	potential
NUCK03	C006511115	Sand Creek Bridge	c1910	1- 30' pinned Pratt half-hip pony truss	19	non-eligible
NUCK04	C006554615	Lost Creek Bridge	c1910	1- 50' pinned Pratt half-hip pony truss	20	non-eligible
NUCK05	U2360G4605	Eighth Street Bridge	1919	1- 35' concrete deck girder	32	non-eligible
Otoe County						
OTOE01	C006600255	Bridge	c1910	1- 80' pinned Pratt through truss	13	non-eligible
OTOE02	C006600305P	Hooper Creek Bridge	c1910	1- 40' pinned Pratt half-hip pony truss	19	non-eligible
OTOE03	C006601120P	Bridge	1907	1- 30' pinned Pratt truss leg bedstead	19	non-eligible
OTOE04	C006601515	Little Nemaha River Bridge	c1925	1- 70' rigid Warren pony truss	20	non-eligible
OTOE05	C006601805P	Bridge	1912	1- 24' concrete filled spandrel arch	38	potential
OTOE06	C006602103	Little Nemaha River Bridge	c1910	1- 70' pinned Pratt pony truss	10	non-eligible
OTOE07	C006602530	Little Nemaha River Bridge	1901	1- 65' pinned Pratt pony truss	41	potential
OTOE08	C006602810	Little Nemaha River Bridge	c1910	1- 60' pinned Pratt pony truss	22	non-eligible
OTOE09	C006603305	Muddy Creek Bridge	c1910	2- 80' pinned Pratt pony truss	20	non-eligible
OTOE10	C006604305P	Flood Creek Bridge	1901	1- 45' pinned Pratt half-hip pony truss	41	potential
OTOE11	C006605105	Fox Creek Bridge	c1910	1- 60' pinned Pratt pony truss	22	non-eligible
OTOE12	C006610270	Wolf Creek Bridge	1889	1- 76' pinned Pratt through truss	48	potential
OTOE13	C006611330	Little Nemaha River Bridge	c1905	1- 60' pinned Pratt pony truss	23	non-eligible
OTOE14	C006612105	Muddy Creek Bridge	1906	1- 50' pinned Pratt half-hip pony truss	33	non-eligible

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OTOE15	COO6613035	Muddy Creek Bridge	c1905	1- 50' pinned Pratt pony truss	19	non-eligible
OTOE16	C006614120	Little Nemaha River Bridge	c1910	1- 60' pinned Pratt half-hip pony truss	22	non-eligible
OTOE17	C006614920	Wilson Creek Bridge	c1910	1- 40' pinned Pratt truss leg bedstead	19	non-eligible
OTOE18	C006616140	Wyoming Bridge	1878(?)	1- 80' bowstring pony arch-truss	54	potential
OTOE19	C006621445	Little Nemaha River Bridge	1911	1- 70' pinned Pratt pony truss	32	non-eligible
OTOE20	C006621460	Wilson Creek Bridge	1911	1- 64' pinned Pratt pony truss	34	non-eligible
OTOE21	C006622025	Little Nemaha River Bridge	c1915	1- 90' pin/rigid Pratt pony truss	24	non-eligible
OTOE22	C006622030	Bridge	c1915	1- 27' concrete filled spandrel arch	15	non-eligible
OTOE23	C006622210	Brownell Creek Bridge	c1910	1- 50' pinned Pratt half-hip pony truss	19	non-eligible
OTOE24	C006623055	Little Nemaha River Bridge	1895(?)	1-100' pinned Pratt through truss	23	non-eligible
OTOE25	C006623075	Rock Creek Bridge	c1910	1- 60' pinned Pratt half-hip pony truss	22	non-eligible
OTOE26	C006623435	Little Nemaha River Bridge	c1915	1-145' pinned Parker through truss	19	non-eligible
OTOE27	C006631625	Little Nemaha River Bridge	1874	1- 70' bowstring pony arch-truss	62	eligible
OTOE28	C006633215	Bridge	1876(?)	1- 40' bowstring pony arch-truss	43	potential
OTOE29	C006653230	Bridge	c1910	1- 50' pinned Pratt half-hip pony truss	19	eligible
OTOE30	S075 04754	Nebraska City Viaduct	1936-37	6-106' cantilevered steel stringer	42	non-eligible
OTOE31	U1695B6505	Ninth Street Bridge	1911	1- 48' concrete filled spandrel arch	32	non-eligible
OTOE32	U1695K6305	Thirteenth Street Bridge	c1915	1-100' pinned Pratt through truss	6	non-eligible
Pawnee County						
PAWN01	C00670405P	Big Nemaha River Bridge	c1910	1-140' rigid Pratt through truss	28	non-eligible
PAWN02	C00671105	Burlington Northern Underpass	1912	2- 41' steel deck plate girders	28	non-eligible
PAWN03	C006702005P	Turkey Creek Bridge	c1935	1- 60' steel plate through girder	22	non-eligible
PAWN04	C006702115	Bridge	c1900	1- 64' pinned Pratt pony truss	40	potential
PAWN05	C006702815P	Turkey Creek Bridge	c1925	1-100' rigid Pratt pony truss	13	non-eligible
PAWN06	C006702905	Johnson Creek Bridge	c1910	1- 60' pinned Pratt half-hip pony truss	22	non-eligible
PAWN07	C006703505P	Taylor Branch Bridge	c1901-05	1- 40' pinned Pratt truss leg bedstead	30	non-eligible
PAWN08	C006703820	Manley Creek Bridge	c1925	1- 50' rigid Warren pony truss	13	non-eligible
PAWN09	C006704105P	Table Rock Bridge	c1925	1-150' pinned Pratt through truss	11	non-eligible
PAWN10	C006710235	Todd Creek Bridge	1911	1- 60' pinned Pratt half-hip pony truss	32	non-eligible
PAWN11	C006710815	Rock Creek Bridge	c1930	1- 40' steel plate through girder	18	non-eligible
PAWN12	C006712305	Bridge	c1915	1- 27' concrete slab	19	non-eligible
PAWN13	C006713420	Turkey Creek Bridge	c1930	1-100' rigid Pratt pony truss	13	non-eligible
PAWN14	C006673505	Clear Creek Bridge	c1920	1- 45' rigid Warren pony truss	22	non-eligible
PAWN15	C006713510	Todd Creek Bridge	c1925	1-100' rigid Pratt pony truss	22	non-eligible
PAWN16	C006723840	Big Nemaha River Bridge	c1925	1-140' rigid Pratt through truss	20	non-eligible
PAWN17	C006733610P	Cincinnati Bridge	1879-80	1-119' bowstring through arch-truss	67	eligible
Perkins County						
NONE						
Phelps County						
PHEL01	C006903805P	Spring Creek Bridge	1912	1- 60' pin/rigid Pratt pony truss	36	non-eligible
PHEL02	C006904610	Spring Creek Bridge	1907	1- 60' pinned Pratt half-hip pony truss	43	potential
PHEL03	C006910505	Bridge	1912	1- 40' pin/rigid Pratt pony truss	33	non-eligible

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Pierce County						
PIER01	C007000805	Elkhorn River Bridge	c1910	1- 50' pinned Pratt half-hip pony truss	27	non-eligible
PIER02	C007001705	Willow Creek Bridge	c1910	1- 50' pinned Pratt half-hip pony truss	27	non-eligible
PIER03	C007001705P	Dry Creek Bridge	c1910	1- 50' pinned Pratt pony truss	27	non-eligible
PIER04	C007001820	Yankton Slough Bridge	c1910	1- 44' pinned Pratt half-hip pony truss	29	non-eligible
PIER05	C007002215	Elkhorn River Bridge	c1910	1- 50' pinned Pratt half-hip pony truss	31	eligible
PIER06	C007004105	Elkhorn River Bridge	c1920	1- 80' rigid Pratt pony truss	22	non-eligible
PIER07	C007004410	Elkhorn River Bridge	c1910	1- 80' pinned Pratt pony truss	34	non-eligible
PIER08	C007004525	Bridge	c1910	1- 50' pinned Pratt half-hip pony truss	29	non-eligible
PIER09	C007011310	Dry Creek Bridge	c1910	1- 32' steel stringer	27	non-eligible
PIER10	C007011915	Dry Creek Bridge	c1910	1- 50' pinned Pratt half-hip pony truss	27	non-eligible
PIER11	C007012430	Bridge	c1910	1- 45' pinned Pratt half-hip pony truss	27	non-eligible
PIER12	C007012615	Bridge	c1913	1- 30' rigid lattice pony truss	42	potential
PIER13	C007012720	Bridge	1914	1- 22' steel stringer	33	non-eligible
PIER14	C007012735	Elkhorn River Bridge	c1910	1- 50' pinned Pratt half-hip pony truss	29	non-eligible
PIER15	C007012825	Bridge	c1910	1- 55' pinned Pratt pony truss	29	non-eligible
PIER16	C007013015	Yankton Slough Bridge	c1910	1- 60' pinned Pratt half-hip pony truss	30	non-eligible
PIER17	C007013210	Elkhorn River Bridge	c1910	1- 80' pinned Pratt pony truss	32	non-eligible
PIER18	C007013605	Willow Creek Bridge	c1915	1- 50' rigid Pratt pony truss	27	non-eligible
PIER19	C007013805	Willow Creek Bridge	1913	1- 34' rigid lattice pony truss	48	potential
PIER20	C007013920	Elkhorn River Bridge	c1910	2- 60' pinned Pratt half-hip pony truss	34	non-eligible
PIER21	C007013930	Bridge	c1910	1- 50' pinned Pratt half-hip pony truss	29	non-eligible
PIER22	C007014205	Elkhorn River Bridge	1914	1-120' pinned Pratt through truss	38	eligible
PIER23	C007022310	Elkhorn River Bridge	c1910	1- 60' pinned Pratt half-hip pony truss	32	non-eligible
PIER24	C007023820	Elkhorn River Bridge	c1910	1- 80' pinned Pratt pony truss	32	non-eligible
Platte County						
PLATT01	C007113030	Shell Creek Bridge	1939	3- 40' concrete slab	25	non-eligible
PLATT02	C007113710	Columbus Genoa Canal Bridge	1936	2- 54' parabolic concrete slab	26	non-eligible
PLATT03	C007123205	Looking Glass Creek Bridge	c1905	1- 60' pinned Pratt half-hip pony truss	35	non-eligible
PLATT04	S030 37773L	Columbus Loup River Bridge	1932-33	7-160' rigid Parker through truss	68	eligible
Polk County						
NONE						
Red Willow County						
NONE						
Richardson County						
RICH01	C007400425	Little Muddy Creek Bridge	c1925	1-100' bolted Pratt pony truss	22	non-eligible
RICH02	C007400805	Long Branch Bridge	c1915	1- 90' pinned Pratt pony truss	24	non-eligible
RICH03	C007400815	Little Muddy Creek Bridge	c1925	1-100' rigid Pratt pony truss	22	non-eligible
RICH04	C007401105	Fourmile Creek Bridge	c1925	1-100' rigid Pratt pony truss	22	non-eligible
RICH05	C007401210	Long Branch Bridge	c1915	1- 90' pinned Pratt through truss	24	non-eligible
RICH06	C007402810	Big Nemaha River Bridge	c1925	1-150' rigid Camelback through truss	26	non-eligible
RICH07	C007402810P	Gunzenhauser's Bridge	1912	1- 60' pinned Pratt pony truss	36	non-eligible

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Inv.No.	NDOR No.	Structure Name	Date	Description	Rating	NRHP
RICH08	C007403205	Bridge	c1900	1- 40' pinned truss leg bedstead	24	non-eligible
RICH09	C007411440	Goolsby Creek Bridge	c1915	1-108' pinned Pratt through truss	19	non-eligible
RICH10	C007413710	Muddy Creek Bridge	c1925	1-100' rigid Pratt pony truss	22	non-eligible
RICH11	C007413840	Pony Creek Bridge	c1925	1-100' rigid Pratt pony truss	22	non-eligible
RICH12	C007421220	Sardine Branch Bridge	c1915	1- 70' pinned Pratt pony truss	22	non-eligible
RICH13	C007421615	Muddy Creek Bridge	c1925	1-120' rigid Pratt through truss	17	non-eligible
RICH14	C007422030	Mackrelroy Creek Bridge	1904	1- 90' pinned Pratt pony truss	40	potential
RICH15	C007425715	Winnebago Creek Bridge	c1935	1-100' rigid Camelback pony truss	31	non-eligible
RICH16	C007432315	Whiskey Run Bridge	c1915	1- 83' pinned Pratt through truss	31	non-eligible
RICH17	C007441715	Nedrow's Bridge	1912	1- 70' pinned Pratt pony truss	36	non-eligible
RICH18	C007442605	Muddy Creek Bridge	c1915	1-125' pinned Pratt through truss	22	non-eligible
RICH19	C007442610	Halfbreed Creek Bridge	c1925	1-120' rigid Pratt through truss	20	non-eligible
RICH20	C007472425	Winnebago Creek Bridge	c1905	1-100' pinned Pratt through truss	20	non-eligible
RICH21	S159 01306	Rulo Viaduct	1940	7- 62' steel deck girder	36	non-eligible
RICH22	S159 01373	Rulo Bridge	1938	3-375' rigid Pennsylvania through truss	65	eligible
RICH23	NONE	Bridge	1938-40	1- 12' steel stringer	25	non-eligible
RICH24	NONE	Culvert	1938-40	1- 12' stone arch culvert	25	non-eligible
RICH25	NONE	Culvert	1938-40	1- 12' stone arch culvert	25	non-eligible
RICH26	NONE	Culvert	1938-40	1- 12' stone arch culvert	25	non-eligible
RICH27	NONE	Culvert	1938-40	1- 12' stone arch culvert	25	non-eligible
RICH28	NONE	Culvert	1938-40	1- 12' stone arch culvert	21	non-eligible
RICH29	NONE	Culvert	1938-40	1- 12' stone arch culvert	21	non-eligible
RICH30	NONE	Culvert	1938-40	1- 12' stone arch culvert	23	non-eligible
Rock County						
ROCK01	C007522105	Carns State Aid Bridge	1912-13	5- 54' concrete filled spandrel arch	64	eligible
Saline County						
SALI01	C007601220	Big Blue River Bridge	c1925	2-120' pinned Pratt through truss	22	non-eligible
SALI02	C007601330	Turkey Creek Bridge	1927	1- 86' steel plate through girder	32	non-eligible
SALI03	C007601515	Swan Creek Bridge	c1915	1- 60' rigid Pratt pony truss	22	non-eligible
SALI04	C007601725	Bridge	1920	1- 40' concrete filled spandrel arch	41	potential
SALI05	C007601905P	Swan Creek Bridge	1927	1- 80' rigid Warren pony truss	20	non-eligible
SALI06	C007602630	Turkey Creek Bridge	c1935	1-100' rigid Camelback pony truss	22	non-eligible
SALI07	C007602710	Swan Creek Bridge	c1927	1- 87' steel plate through girder	22	non-eligible
SALI08	C007602730	Turkey Creek Bridge	c1935	1-100' rigid Camelback pony truss	22	non-eligible
SALI09	C007603305P	Blue River Bridge	1918	1-100' rigid Pratt pony truss	38	non-eligible
SALI10	C007603410	Bridge	c1935	3- 19' concrete slab with stone veneer	22	non-eligible
SALI11	C007603505	Swan Creek Bridge	c1915	1- 45' pinned Pratt pony truss	19	non-eligible
SALI12	C007603605	Swan Creek Bridge	c1925	1-100' rigid Pratt pony truss	22	non-eligible
SALI13	C007603905P	Big Blue River Bridge	c1930	1-170' rigid Parker through truss	28	non-eligible
SALI14	C007604020	Turkey Creek Bridge	c1925	1-100' rigid Pratt pony truss	22	non-eligible
SALI15	C007604705P	Turkey Creek Bridge	1929	1-100' rigid Pratt pony truss	34	non-eligible
SALI16	C007612310	Swan Creek Bridge	1922	1- 40' pinned Pratt pony truss	29	non-eligible
SALI17	C007613140	Big Blue River Bridge	1929	1-100' rigid Pratt pony truss	34	non-eligible
SALI18	C007613905	Maryska Bridge	c1925	1-100' rigid Pratt through truss	17	non-eligible

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SALI19	C007614210	Swan Creek Bridge	1919	1-100' rigid Pratt pony truss	28	non-eligible
SALI20	C007614820	Swan Creek Bridge	1929	1- 60' rigid Warren pony truss	10	non-eligible
SALI21	C007624445	Turkey Creek Bridge	c1925	1-100' rigid Pratt pony truss	22	non-eligible
SALI22	U062044305	Wood Avenue Bridge	c1915	1-120' pinned Pratt through truss	22	non-eligible
Sarpy County						
SARP01	C007701905	Buffalo Creek Bridge	c1910	1- 90' pinned Pratt pony truss	30	non-eligible
SARP02	C007702405P	Bridge	1910	1- 58' pinned Pratt half-hip pony truss	31	non-eligible
SARP03	C007704305P	Big Papillion Creek Bridge	c1905	1- 80' pinned Pratt through truss	20	non-eligible
SARP04	C007710305	252nd Street Bridge	c1910	1-120' pinned Pratt through truss	23	non-eligible
SARP05	C007710605P	Cornhusker Road Bridge	c1910	1- 40' pinned Pratt half-hip pony truss	29	non-eligible
SARP06	C007712515	Big Papillion Creek Bridge	c1940	1- 80' welded/bolted tied arch pony truss	40	potential
SARP07	S006 34238	U.S. Highway 6 Bridge	1944	7- 33' continuous concrete slab	32	non-eligible
Saunders County						
SAUN01	C007801830	Duck Creek Bridge	c1910	1- 70' pinned Pratt half-hip pony truss	27	non-eligible
SAUN02	C007801835	Duck Creek Bridge	c1910	1- 70' pinned Pratt half-hip pony truss	27	non-eligible
SAUN03	C007802105	Bridge	c1925	1-120' rigid Pratt through truss	5	non-eligible
SAUN04	C007802205	Cottonwood Creek Bridge	c1910	1-120' pinned Pratt through truss	19	non-eligible
SAUN05	C007803610	Hunters Slough Bridge	c1910	1- 50' pinned Pratt half-hip pony truss	22	non-eligible
SAUN06	C007804115	Wahoo Creek Bridge	c1935	1-100' rigid Camelback pony truss	14	non-eligible
SAUN07	C007804205	North Oak Creek Bridge	c1910	1-130' pinned Pratt through truss	27	non-eligible
SAUN08	C007804710P	Wahoo Creek Bridge	c1910	1-100' pinned Pratt through truss	27	non-eligible
SAUN09	C007805315	Wahoo Creek Bridge	c1910	1- 68' pinned Pratt half-hip pony truss	30	non-eligible
SAUN10	C007805445	Silver Creek Bridge	1925	1-100' rigid Pratt through truss	9	non-eligible
SAUN11	C007810920	Bridge	c1935	1-100' rigid Camelback pony truss	14	non-eligible
SAUN12	C007811030	Sand Creek Bridge	1924	1-120' rigid Pratt through truss	9	non-eligible
SAUN13	C007811340	Cottonwood Creek Bridge	c1910	1-120' pinned Pratt through truss	21	non-eligible
SAUN14	C007811535	Bridge	c1935	1-100' rigid Camelback pony truss	14	non-eligible
SAUN15	C007812020	Cottonwood Creek Bridge	1926	1-100' rigid Pratt pony truss	32	non-eligible
SAUN16	C007812940	Sand Creek Bridge	c1910	1-120' pinned Pratt through truss	27	non-eligible
SAUN17	C007814910P	Silver Creek Bridge	c1910	1-100' pinned Pratt pony truss	32	non-eligible
SAUN18	C007815060	Wahoo Creek Bridge	c1925	1-100' rigid Pratt through truss	5	non-eligible
SAUN19	C007821625	Otoe Creek Bridge	c1925	1-100' rigid Pratt pony truss	22	non-eligible
SAUN20	C007822140	Duck Creek Bridge	c1925	1-100' rigid Pratt pony truss	22	non-eligible
SAUN21	C007822840	Upper Clear Creek Bridge	1926	1- 60' rigid Warren pony truss	7	non-eligible
SAUN22	C007824650	Wahoo Creek Bridge	c1910	1-100' pinned Pratt through truss	27	non-eligible
SAUN23	S006 33962	Louisville Branch Overhead	1931	9- 53' steel stringer	33	non-eligible
SAUN24	S006 34032	Bridge	1931	1- 60' steel stringer	32	non-eligible
SAUN25	U0105F5605	Ashland Bridge	1936	1-100' rigid polygonal Warren pony truss	50	potential
Scotts Bluff County						
SCOTT01	C007900905P	Tri-State Canal Br.	c1915	1- 70' rigid Pratt half-hip pony truss	38	potential
SCOTT02	C007910325	Henry State Aid Bridge	1919	4- 67' concrete filled spandrel arch	54	potential
SCOTT02	C007910330	Henry State Aid Bridge	1919	4- 67' concrete filled spandrel arch	54	potential
SCOTT03	C007914525	Interstate Canal Bridge	c1915	1- 53' rigid Pratt pony truss	44	potential

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SCOTT04	C007921915	Tri-State Canal Br.	c1915	1- 70' rigid Pratt half-hip pony truss	38	potential
SCOTT05	C007951215	Tri-State Canal Br.	c1915	1- 70' rigid Pratt half-hip pony truss	38	potential
SCOTT06	SL79D00185	Morrill State Aid Bridge	1918-19	7- 54' concrete filled spandrel arch	49	non-eligible
SCOTT07	S026 01367R	Mitchell State Aid Bridge	1918-19	12-54' concrete filled spandrel arch	54	potential
Seward County						
SEWA01	C008000610	Big Blue River Bridge	c1910	1- 90' pinned Pratt through truss	10	non-eligible
SEWA02	C008000805	Big Blue River Bridge	c1920	1- 90' pin/rigid Pratt pony truss	18	non-eligible
SEWA03	C008001115	Big Blue River Bridge	c1925	1-100' rigid Pratt pony truss	22	non-eligible
SEWA04	C008001310	Big Blue River Bridge	c1925	1-100' rigid Pratt pony truss	22	non-eligible
SEWA05	C008001405	Lincoln Creek Bridge	c1915	1- 70' pinned Pratt pony truss	18	non-eligible
SEWA06	C008001815	Big Blue River Bridge	c1915	1- 90' pinned Pratt pony truss	20	non-eligible
SEWA07	C008002010	Big Blue River Bridge	c1925	1-100' rigid Pratt pony truss	22	non-eligible
SEWA08	C008002505	Big Blue River Bridge	c1908	1- 60' pinned Pratt half-hip pony truss	31	non-eligible
SEWA09	C008002905P	Crooked Creek Bridge	c1920	1- 60' pin/rigid Pratt pony truss	20	non-eligible
SEWA10	C008003005P	Big Blue River Bridge	c1915	1-100' pinned Pratt pony truss	18	non-eligible
SEWA11	C008003605	Beaver Creek Bridge	c1900	1- 60' pinned Pratt pony truss	23	non-eligible
SEWA12	C008003710	Big Blue River Bridge	c1915	1- 83' pinned Pratt pony truss	18	non-eligible
SEWA13	C008003905P	Big Blue River Bridge	c1920	1-100' pin/rigid Pratt pony truss	22	non-eligible
SEWA14	C008004205	Indian Creek Bridge	c1905	1- 60' pinned Pratt half-hip pony truss	19	non-eligible
SEWA15	C008004310P	Culver Creek Bridge	1920	1- 40' pin/rigid Pratt pony truss	17	non-eligible
SEWA16	C008010620	Plum Creek Bridge	c1915	1- 50' pinned Pratt pony truss	17	non-eligible
SEWA17	C008011415	Plum Creek Bridge	c1905	1- 70' pinned Pratt pony truss	19	non-eligible
SEWA18	C008011610	Big Blue River Bridge	c1900	1- 80' pinned Pratt pony truss	21	non-eligible
SEWA19	C008012125	Big Blue River Bridge	c1900	1- 80' pinned Pratt pony truss	21	non-eligible
SEWA20	C008014605	Big Blue River Bridge	c1925	1-100' rigid Pratt pony truss	22	non-eligible
SEWA21	C008023110	Big Weedy Creek Bridge	c1905	1- 50' pinned Pratt half-hip pony truss	16	non-eligible
SEWA22	C008034515	Middle Creek Bridge	c1920	1- 35' pin/rigid Pratt pony truss	17	non-eligible
SEWA23	S006 29351	Big Blue River Bridge	1933	5- 90' steel cantilevered stringer	28	non-eligible
Sheridan County						
SHER01	C008124905P	Colclesser Bridge	1888	1-166' pinned Baltimore through truss	52	potential
SHER02	NONE	Loosveldt Bridge	1888	1-250' pinned Baltimore through truss	59	potential
Sherman County						
SHERM01	C008201305	Bridge	1914	1- 40' pinned Pratt half-hip pony truss	33	non-eligible
SHERM02	C008201520	Mud Creek Bridge	c1925	1-100' rigid Pratt pony truss	37	non-eligible
SHERM03	C008202805	Clear Creek Bridge	c1915	1- 80' pin/rigid Pratt pony truss	34	non-eligible
SHERM04	NONE	Rock Creek Bridge	1912	1- 40' pinned Pratt half-hip pony truss	33	non-eligible
Sioux County						
SIOU01	C008301205P	Montrose Bridge	1915-16	1-100' pin/rigid Pratt pony truss	43	potential
SIOU02	C008302905	Interstate Canal Siphon	1908	2- 10' concrete siphon	42	potential
Stanton County						
STAN01	C008401110	Union Creek Bridge	1921	1- 90' pin/rigid Pratt pony truss	36	non-eligible

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STAN02	C008401310	Union Creek Bridge	1916	1-175' pinned Parker through truss	41	potential
STAN03	C008402735	Cedar Creek Bridge	c1905	1- 60' pinned Pratt half-hip pony truss	31	non-eligible
STAN04	C008403605P	Union Creek Bridge	c1905	1- 60' pinned Pratt half-hip pony truss	25	non-eligible
STAN05	C008404005	Bridge	c1910	1- 95' pinned Pratt pony truss	34	non-eligible
STAN06	C008404035	Maple Creek Bridge	c1905	1- 60' pinned Pratt half-hip pony truss	31	non-eligible
STAN07	C008413205	Union Creek Bridge	1916	1-175' pinned Parker through truss	41	potential
STAN08	C008414635	Maple Creek Bridge	c1905	1- 50' pinned Pratt half-hip pony truss	28	non-eligible
STAN09	C008420815	Humbug Creek Bridge	c1905	1- 60' pinned Pratt half-hip pony truss	31	non-eligible
Thayer County						
THAY01	C008500335	Big Sandy Creek Bridge	c1915	1- 50' pinned Pratt half-hip pony truss	14	non-eligible
THAY02	C008500510	Hendrick's Bridge	c1908	2-100' pinned Pratt through truss	22	non-eligible
THAY03	C008500725	Little Blue River Bridge	c1915	1-125' pinned Pratt through truss	22	non-eligible
THAY04	C008504145	Big Sandy Creek Bridge	c1925	1-125' rigid Pratt through truss	11	non-eligible
THAY05	C008514335	Sandy Creek Bridge	c1915	1- 90' pinned Pratt pony truss	24	non-eligible
THAY06	C008514505P	Thomas Bridge	1912	1- 70' pinned Pratt half-hip pony truss	32	non-eligible
THAY07	C008522315	Big Sandy Creek Bridge	c1910	1- 70' pinned Pratt half-hip pony truss	20	non-eligible
THAY08	C008523610	Bergen Bridge	c1915	1- 50' pinned Pratt half-hip pony truss	19	non-eligible
THAY09	C008532915	Big Sandy Creek Bridge	1912	1- 60' pinned Pratt half-hip pony truss	26	non-eligible
THAY10	S136 12738	Spring Creek Bridge	1941	5- 32' concrete rigid frame	25	non-eligible
THAY11	NONE	Bridge	c1905-15	1- 10' stone arch	30	non-eligible
Thomas County						
NONE						
Thurston County						
THUR01	C008700510	Rattlesnake Creek Bridge	c1910	1- 50' pinned Pratt half-hip pony truss	29	non-eligible
THUR02	C008700620	North Omaha Creek Bridge	c1905	1- 60' pinned Pratt truss leg bedstead	43	potentially
THUR03	C008700625	North Omaha Creek Bridge	c1905	1- 50' pinned Pratt half-hip pony truss	29	non-eligible
THUR04	C008700805P	Logan Creek Bridge	c1910	1-120' pinned Pratt through truss	29	non-eligible
THUR05	C008701305P	Bridge	c1910	1- 50' pinned Pratt half-hip pony truss	29	non-eligible
THUR06	C008701715	North Omaha Creek Bridge	c1915	1- 60' pinned Pratt pony truss	32	non-eligible
THUR07	C008702015	Logan Creek Bridge	c1915	1-120' pinned Pratt through truss	29	non-eligible
THUR08	C008702205	Rattlesnake Creek Bridge	c1910	1- 50' pinned Pratt half-hip pony truss	29	non-eligible
THUR09	C008703105P	North Omaha Creek Bridge	c1905	1- 80' pinned Pratt truss leg bedstead	45	potential
THUR10	C008710425	South Omaha Creek Bridge	c1925	1-100' rigid Camelback pony truss	31	non-eligible
THUR11	C008710810P	South Omaha Creek Bridge	c1910	1- 60' pinned Pratt half-hip pony truss	32	non-eligible
THUR12	C008711415	Middle Creek Bridge	c1910	1- 60' pinned Pratt half-hip pony truss	32	non-eligible
THUR13	C008711615	Cow Creek Bridge	c1905	1- 60' pinned Pratt truss leg bedstead	38	non-eligible
THUR14	C008711805	Middle Creek Bridge	1913	1- 50' pinned Pratt half-hip pony truss	33	non-eligible
THUR15	C008722635	South Omaha Creek Bridge	c1910	1- 50' pinned Pratt half-hip pony truss	29	non-eligible
THUR16	C008732030	Cow Creek Bridge	c1910	1- 58' pinned Pratt half-hip pony truss	29	non-eligible
Valley County						
VALL01	C008804405	Lee Creek Bridge	1915	1- 23' steel stringer	22	non-eligible
VALL02	C008804405P	Hawthorne Creek Bridge	1916	1- 28' steel stringer	31	non-eligible

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VALL03	C008813330	Bridge	1915	1- 22' steel stringer	22	non-eligible
VALL04	C008813610	Hawthorne Creek Bridge	c1910	1- 25' steel stringer	25	non-eligible
VALL05	C008821325P	Turtle Creek Bridge	1916	1- 60' pinned Pratt pony truss	29	non-eligible
VALL06	C008833415	North Loup Bridge	1912	3-100' pinned Pratt through	61	eligible
Washington County						
WASH01	C008900710	Ray Creek Bridge	c1925	1- 50' rigid Warren pony truss	23	non-eligible
WASH02	C008904010	Big Papillion Creek Bridge	c1930	1-100' rigid Pratt pony truss	26	non-eligible
WASH03	C008903205P	Bell Creek Bridge	c1930	1-100' rigid Pratt pony truss	26	non-eligible
WASH04	C008921910P	New York Creek Bridge	c1915	1- 60' pin/rigid Pratt pony truss	28	non-eligible
WASH05	C008923710	Mill Creek Bridge	c1945	1- 80' steel Bailey truss	25	non-eligible
WASH06	S030 450550	Abraham Lincoln Memorial Br.	1928-29	3-333' rigid Pennsylvania through truss	74	eligible
WASH07	U028503505P	Blair Underpass	c1923	3- 86' steel deck girder	43	potential
Wayne County						
WAYN01	C009001345	Dog Creek Bridge	c1915	1- 70' pin/rigid Pratt pony truss	32	non-eligible
WAYN02	C009003105	Plum Creek Bridge	c1910	1- 50' pinned Pratt half-hip pony truss	29	non-eligible
WAYN03	C009005115	Coon Creek Bridge	c1910	1- 40' pinned Pratt half-hip pony truss	29	non-eligible
WAYN04	C009012330	Dog Creek Bridge	c1910	1- 50' pinned Pratt half-hip pony truss	29	non-eligible
WAYN05	C009020810	Dog Creek Bridge	c1910	1- 44' pinned Pratt half-hip pony truss	29	non-eligible
Webster County						
WEBS01	C009123540	Willow Creek Bridge	1911	1- 36' concrete filled spandrel arch	38	potential
WEBS02	C009132605	Willow Creek Bridge	1911	1- 38' concrete filled spandrel arch	38	potential
WEBS03	S281 00423	Red Cloud Bridge	1935	3-200' rigid continuous Warren pony truss	69	eligible
Wheeler County						
NONE						
York County						
YORK01	C009300405	Big Blue River Bridge	1910	1- 45' pinned Pratt pony truss	35	non-eligible
YORK02	C009300410	Bridge	1918	1- 35' rigid Pratt pony truss	29	non-eligible
YORK03	C009300710	Beaver Creek Bridge	c1915	1- 40' pinned Pratt pony truss	35	non-eligible
YORK04	C009301810	Lincoln Creek Bridge	1918	1- 40' rigid Pratt pony truss	33	non-eligible
YORK05	C009301810	Beaver Creek Bridge	1910	1- 45' pinned Pratt pony truss	33	non-eligible
YORK06	C009301810	Big Blue River Bridge	1910	1- 80' pinned Pratt through truss	33	non-eligible
YORK07	C009304915	Big Blue River Bridge	1914	1- 90' pin/rigid Pratt pony truss	34	non-eligible
YORK08	C009311110	Lincoln Creek Bridge	1916	1- 60' rigid Pratt pony truss	36	non-eligible
YORK09	C009311813	Lincoln Creek Bridge	1917	1- 40' pinned Pratt pony truss	33	non-eligible
YORK10	C009313710	Big Blue River Bridge	1925	4- 22' concrete slab	37	non-eligible
YORK11	C009314115	Beaver Creek Bridge	1915	1- 70' pinned Pratt pony truss	36	non-eligible
YORK12	C009321710	Lincoln Creek Bridge	1915	1- 50' pinned Pratt pony truss	33	non-eligible
YORK13	C009322905	Beaver Creek Bridge	1916	1- 45' pinned Pratt pony truss	33	non-eligible
YORK14	C009333015	Beaver Creek Bridge	1914-15	1- 70' pinned Pratt pony truss	36	non-eligible
YORK15	S081 06204	York Subway	1938-39	1- 33' concrete rigid frame	47	potential
YORK15	S081 06205	York Subway	1938-39	1- 33' concrete rigid frame	47	potential
YORK15	S081 06208	York Subway	1938-39	1- 33' concrete rigid frame	47	potential

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Big Blue River Bridge
NDOR: C000100405

ADAM01

DATE(S) OF CONSTRUCTION
ca.1925

LOCATION
county road over the Big Blue River; S1/12, T8N, R10W
1 mile south, 1 mile west of Hansen; Adams County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 17)

CONDITION
good

OWNER
Adams County

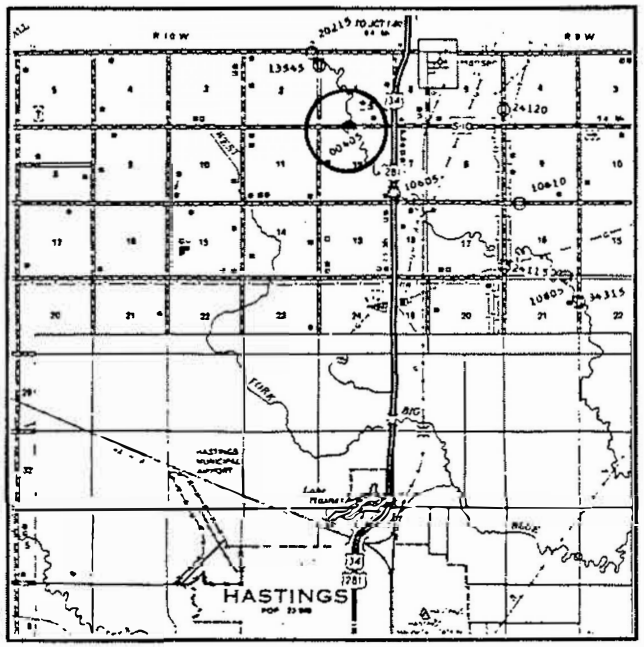
span number:	1	superstructure:	concrete filled spandrel arch
span length:	29.0'	substructure:	concrete abutments and wingwalls
total length:	30.0'	floor/decking:	gravel over earth fill
roadway wdt.:	22.4'	other features:	solid concrete railing set on concrete parapet and flanked by concrete posts

This small-scale bridge carries a gravel-surfaced county road over the Big Blue River on the east-west line between Sections 1 and 12, T8N, R10W, Highland Township. The bridge is set at a skew of approximately 40 degrees, and consists of a single-span, concrete arch with flared, sloped wingwalls. Springing from grade, the arch has a span of approximately 29 feet. Low concrete parapets are set slightly back from the face of the spandrel walls on each elevation, and each is surmounted by a solid concrete railing. The tops of the railing, parapet and spandrel walls are beveled to form a drip coping. Square, beveled, concrete caps are set at each end of the railing, creating the appearance of a low wall flanked by square posts. The bridge has a fairly smooth finish, although a formwork impression rings the mouth of the arch on both elevations. Minor alterations include installation of a utility pipe on the outside of the south elevation and damage to the southwest corner of the railing. Concrete bridges appeared in Adams County as early as 1911, and were commonplace by 1913. The county appears to have designed and built its earliest concrete bridges by itself. In 1914, however, it adopted state standardized plans. The county began to contract its concrete bridge construction in 1916. One contractor, Frank H. Kitts, won the concrete contract in almost every year until 1928, when the Mid-State Construction Company of Hastings, Nebraska, claimed the prize. The next year, the Midland Construction Company was awarded the contract, and it appears to have remained the primary concrete bridge builder through the 1930s. The railing on the Big Blue River Bridge does not conform to state plans, suggesting the structure was built before 1914. However, county records indicate that a wooden bridge crossed the Big Blue at this site as late as 1922, and the concrete structure must date to a later period.

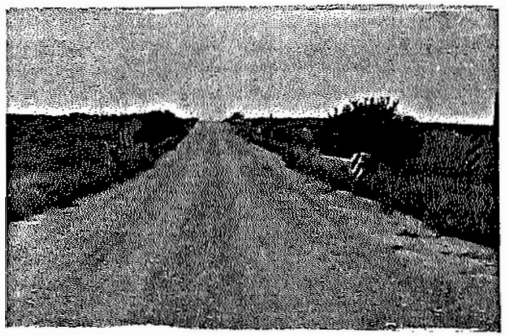
Although Adams County generally relied on state standard bridge plans, the railings on this bridge do not conform to any known state plan. The bridge is a good example of the variability in county concrete bridge building in the 1920s.

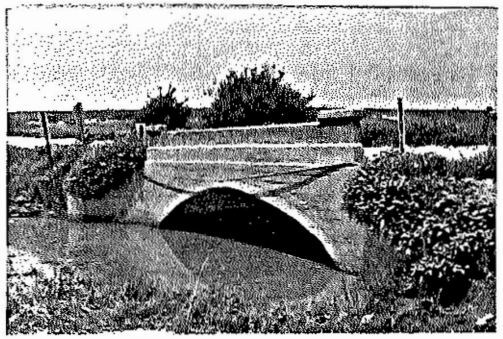
NAME(S) OF STRUCTURE
Big Blue River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C000100405; Proceedings of the Adams County Commissioners, 1911-1935, located in Adams County Courthouse, Hastings, Nebraska; **Bridge Cost Record,** volume 1, listing for Bridge Number 19, 25 February 1922, located in Adams County Courthouse, Hastings, Nebraska; field inspection by Jeffrey A. Hess, 20 July 1989

INVENTORIED BY	**AFFILIATION**	**DATE**
Demian Hess	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Burlington Railroad Overpass ADAM02
NDOR: C000101410

DATE(S) OF CONSTRUCTION
1937

LOCATION
County Highway 14 over Burlington Northern Railroad; S31/6, T8N/7N, R11W
2.5 miles east of Kenesaw; Adams County, Nebraska

USE (ORIGINAL / CURRENT)
highway overpass / highway overpass

RATING NRHP non-eligible (score: 26)

CONDITION
good

OWNER
Adams County

span number:	1	superstructure:	1 steel through plate girder with 10 timber-stringer approach spans
span length:	51.0'	substructure:	timber pile bent abutments and piers
total length:	245.0'	floor/decking:	timber deck
roadway wdt.:	20.4'	other features:	thirty-two degree skew; timber railings

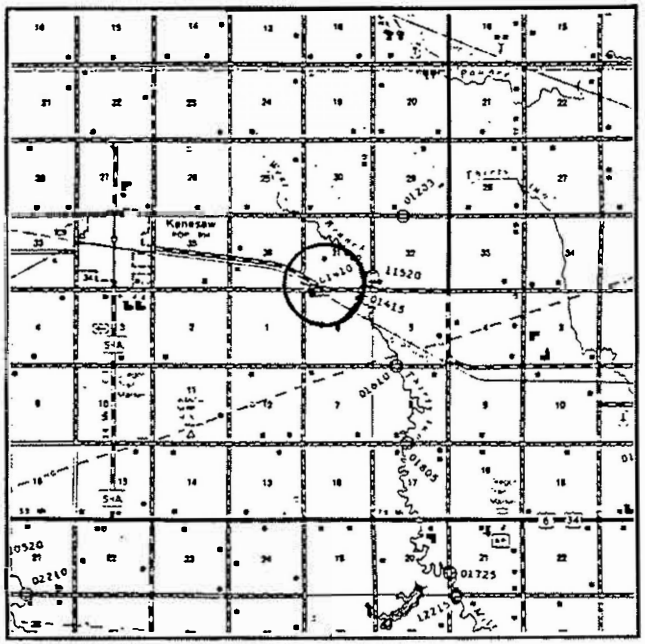
Located about 2-1/2 miles east of Kenesaw, this timber/steel overpass carries unpaved County Highway 14 across a single track of the Burlington Northern Railroad on the Hastings-Denver Line. The highway forms the north-south line between Section 31, T8N, R11 W (Verona Township) and Section 6, T7N, R11W (Juniata Township). Supported by timber-pile bent piers and abutments, the highly skewed viaduct consists of a single, 50-foot-long, plate girder span aproached on each end by five timber stringer spans. All spans have wood decking and wood railings. The structure was designed and built by the Chicago, Burlington and Quincy Railroad, a predecessor line of Burlington Northern. Plans were prepared in 1936, and construction was completed the following year. There is no record of major alterations.

Between 1935 and 1940, the State of Nebraska made use of federal funds to design and build at least 52 grade separations in rural and urban areas, most involving railroad trackage. Conforming to federal specifications concerning materials and labor, the grade-separation projects usually resulted in major concrete-and-steel viaducts that were intended, as the Nebraska Department of Roads noted in its Biennial Report for 1935-1936, to reduce unemployment as much as to increase highway safety. With its multiple timber-trestle approaches, wood decking, timber railings, and simple plate-girder span, this overpass more closely resembles the rural grade-separation projects of the previous decade. It lacks significance for its particular era.

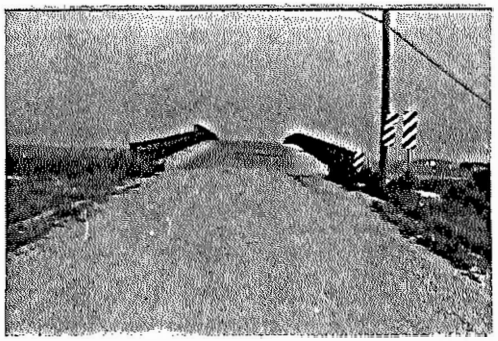
NAME(S) OF STRUCTURE

Burlington Railroad Overpass

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C000101410; Department of Public Works, **Eighteenth Biennial Report**, 1929-30, pp. 11-112; Department of Roads and Irrigation, **Twenty-First Biennial Report**, 1935-36, pp. 71-74; Department of Roads and Irrigation, **Twenty-Third Biennial Report**, 1939-40, pp. 60-62; Henry G. Schlitt, "Railway Grade Crossings," **Nebraska Blue Print** (March 1932): 156-157; Jeffrey A. Hess, Interview with Mike Perrodin, Design Engineer, Bridge and Building Department, Burlington Northern Railroad, Englewood, Colorado Office, 27 December 1990; field inspection by Jeffrey A. Hess, 20 July 1989.

INVENTORIED BY	**AFFILIATION**	**DATE**
Demian Hess	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Cottonwood Creek Bridge
NDOR: C000101910

ADAM03

DATE(S) OF CONSTRUCTION
1924

LOCATION
county road over Cottonwood Creek; S9/10, T5N, R11W
3 miles south of Roseland; Adams County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 26)

CONDITION
good

OWNER
Adams County

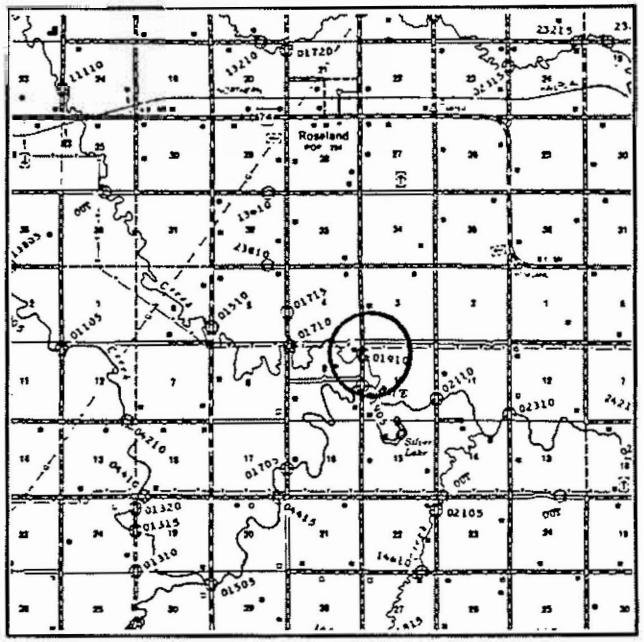
span number:	1	superstructure:	filled spandrel concrete arch
span length:	50.0'	substructure:	concrete abutments and wingwalls
total length:	51.0'	floor/decking:	gravel over earth fill
roadway wdt.:	21.5'	other features:	concrete posts detailed with recessed panels carry two rails

This bridge carries a gravel-surfaced county road over Cottonwood Creek and is located on the east-west line between Sections 9 and 10, T5N, R11W, Silver Lake Township. The structure is a single-span, concrete arch with a protruding arch ring and flared, sloped wingwalls. Springing from grade, the arch spans approximately 50 feet. Concrete posts detailed with recessed panels originally carried railings on each elevation. These railings have been removed, and the roadway is now enclosed by flex-metal guardrails. Largely unaltered and in good condition, Bridge Number C000101910 possesses good integrity. The county board ordered Frank H. Kitts, who had won the annual concrete construction contract, to build the bridge on 15 April 1924. The structure was to be a 50-foot "cement arch top bridge" with a 22-foot roadway and 12-foot wingwalls. Kitts was specifically instructed to build the bridge "according to State Plans and Specifications." Concrete bridges first appeared in Adams County in 1911, and were commonplace by 1913. Of 23 bridges built in 1915, for example, 11 were of all-concrete construction. While the county designed and built the earliest concrete bridges by itself, it adopted state plans in 1914 and began to contract-out concrete construction in 1916. Frank H. Kitts won the first concrete contract. He remained the primary concrete-bridge builder until 1928.

This is a typical example of a mid-1920s, state designed, county funded, concrete arch bridge.

NAME(S) OF STRUCTURE
Cottonwood Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C000101910; Proceedings of the Adams County Commissioners, 1911-1928, located in Adams County Courthouse, Hastings, Nebraska, refer to the following specific entries: 3 March 1916 (Book 9, page 178), 15 April 1924 (Book 11, page 269); field inspection by Jeffrey A. Hess, 20 July 1989.

INVENTORIED BY	AFFILIATION	DATE
Demian Hess	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Little Blue River Bridhge
NDOR: C000102903

ADAM04

DATE(S) OF CONSTRUCTION
1916-17

LOCATION
county highway over the Little Blue River; S8/17, T5N, R10W
2 miles southwest of Ayr; Adams County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 38)

CONDITION
good

OWNER
Adams County

span number:	1	superstructure:	steel, 5-panel, pin-connected Pratt pony truss
span length:	80.0'	substructure:	concrete abutments and wingwalls
total length:	81.0'	floor/decking:	double-layer timber deck over steel stringers
roadway wdt.:	15.3'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: 2 eyebars; vertical: 4 angles with battens; diagonal: 2 eyebars; counter: square eyerod with turnbuckle; sway bracing: plate extends floor beams and is tied to verticals by back-to-back angles to form outrider-type bracing; floor beam: I-beam attached to superstructure by hanger plates; bottom lateral: cross-braced circular-section eyerods

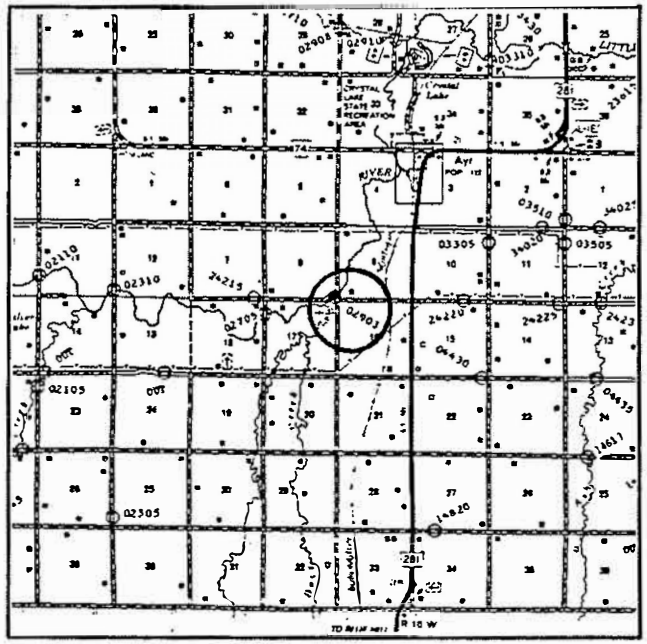
This bridge carries a county road over the Little Blue River on the line between Sections 8 and 17, T5N, R10W, Zero Twp. The structure is a single-span, pinned Pratt pony truss on concrete abutments. Residents first petitioned for a bridge at this location in May 1912. The county apparently did not grant the request, and residents made another petition in November 1914. Several years passed before the county finally took action to construct the requested bridge. On 2 March 1916, the county board awarded the Standard Bridge Company a contract to erect an 80-foot, 5-panel, pin-connected, 20-ton capacity truss over the Little Blue River. Although the county first specified steel pile abutments, the bridge was actually built with concrete abutments. The concrete work was probably done by Frank H. Kitts, who had won the annual concrete contract. Standard completed the bridge and submitted a claim for $5137.37 on 6 March 1917. The bridge has apparently remained unaltered since its completion, and possesses good integrity.

The Nebraska state engineer and virtually all of the major in-state bridge contractors developed standadr designs for pinned Pratt pony trusses in the early 1900s. With a practical span reange between 40 and 100 feet, this venerable truss configuration was well syited for the state's myriad small stream crossings. As a result, the counties purchased thousands of pined Pratt ponies between 1900 and 1920, and they remain the most populous group among the trusses still in use on Nebraska's secondary road system. With its 80-foot span length and 1916 construction date, the Little Blue River Bridge in Adams County typifies small-scale bridge construction in Nebraska. The structure retains a relatively high degree of physical integrity, but lacks any superlative historical or technological attributes.

NAME(S) OF STRUCTURE

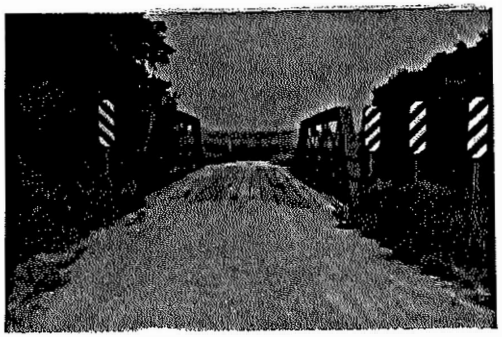
Little Blue River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP

TAKEN FROM NEBRASKA DEPARTMENT OF ROADS GENERAL HIGHWAY MAP



SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C000102903; Proceedings of the Adams County Commissioners, located in Adams County Courthouse, Hastings, Nebraska, Book 8: 7 May 1912 (page 525); Book 9: 16 November 1914 (page 103), 2 March 1916 (page 177), 6 March 1917 (page 237); field inspection by Jeffrey A. Hess, 20 July 1989

INVENTORIED BY	AFFILIATION	DATE
Demian Hess	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Hastings Subway; Hastings Underpass ADAM05
NDOR: none

DATE(S) OF CONSTRUCTION
1934

LOCATION
Burlington Northern Railroad over Routes 281 and 34; Burlington Avenue; Hastings; Adams County, Nebraska

USE (ORIGINAL / CURRENT)
highway underpass / highway underpass

RATING NRHP eligible (score: 61)

CONDITION
good

OWNER
Burlington Northern Railroad

span number:	3	superstructure:	steel, welded, continuous deck girder
span length:	42.0'	substructure:	sloped concrete backwall abutments and open piers with pipe metal railings
total length:	63.0'	floor/decking:	steel railroad tracks on gravel ballast
roadway wdt.:	unknown'	other features:	walkway portion of deck supported on cantilevered steel brackets

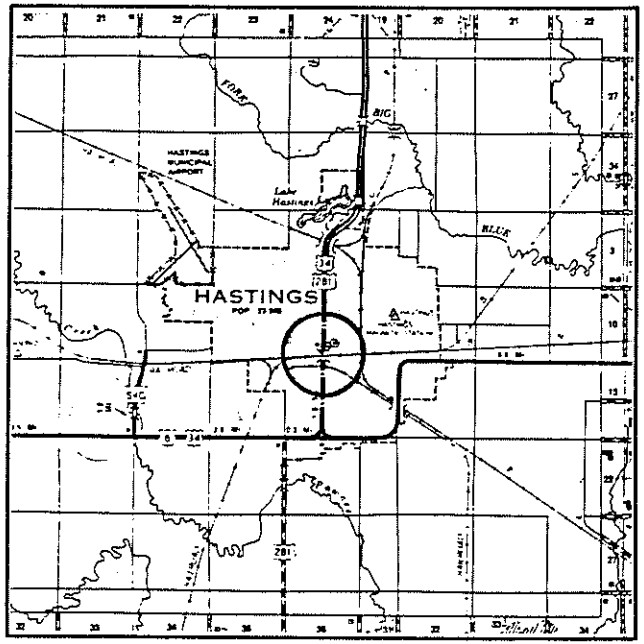
Late in 1929 the City of Hastings approached the Burlington Northern Railroad, seeking to build an underpass at Burlington Avenue to increase safety and end traffic delays. The railroad company estimated that the structure would cost $85,000, and agreed to pay half the expense. The city put the issue of appropriating the balance to popular vote, but the measure was defeated in 1931 and again in 1932. The project might have died there but for the federally sponsored National Industrial Recovery Act (NIRA) of 1933. As part of its appropriation, the NIRA offered funding to improve federal highways through cities. City, state and railroad officials leaped at the opportunity of federal funding, signing an agreement in December 1933 to improve U.S. Routes 281 and 6 through Hastings. As part of the project, Burlington Avenue was to be paved and an underpass constructed. The railroad prepared plans for the underpass, and the state agreed to oversee all construction. The City of Hastings was responsible only for paying damages, providing lighting, and performing minor maintenance. Excavation for the underpass began immediately, and the state awarded the construction contract by mid-April to the Mid-State Engineering Company. The Central Bridge and Construction Company also appears to have been a major contractor or sub-contractor. The American Bridge Company fabricated the superstructure, constructing it in nine separate 30-ton units. Specifications required the superstructure to be electric-arc welded. Given the limited number of trained welders, the state required rigid examinations of the welders before they were allowed on the site. Ceremonies marking the start of construction were held on April 25, and approximately 2,000 people were on hand, including Governor Charles W. Bryan, the state engineer, railroad officials and a sizable delegation of highway improvement boosters. The Hastings Underpass opened for traffic on 10 November 1934, at a cost of approximately $80,142.30, all paid with federal funds. The **Hastings Daily Tribune** gave only brief notice of the bridge's unusual engineering, reserving its praise for the "wide sidewalks" and noting that the underpass "fills a long felt need for a means by which fire trucks might at all times be able to reach the First ward regardless of the railroad traffic." The newspaper further praised the underpass as the "first unit of a program designed to speed highway traffic through this city," with positive implications for the local economy. The Hastings Underpass appears to be largely unaltered, and possesses good integrity.

The Hastings Underpass is historically significant for its role in regional transportation. More importantly, the structure is technologically significant as one of the earliest all-welded bridges in the country.

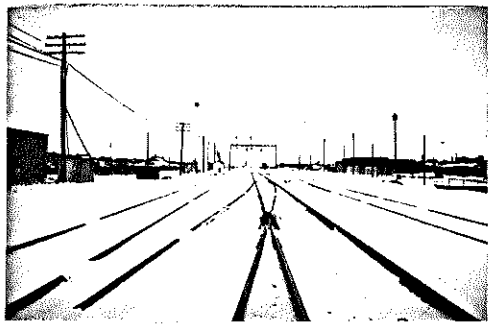
NAME(S) OF STRUCTURE

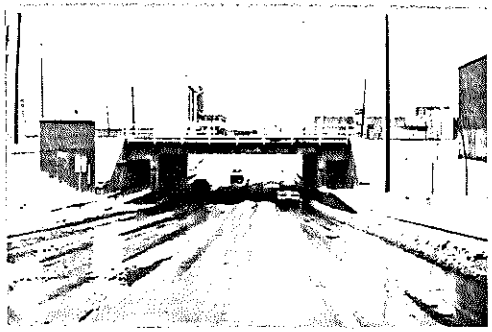
Hastings Subway [Hastings Underpass]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES

Hastings Daily Tribune, refer to the following articles: "Figures Indicate Traffic Movement," 3 December 1929; "Hastings to Get $150,000 Underpass," 5 December 1933; "Men at Work on Underpass," 6 December 1933; "Continue Work on Underpass," 13 April 1934; "Bryan and Cochran Say Paving of No. 6 in Immediate Plans," 26 April 1934; "Burlington Underpass Open Today," 10 November 1934; Department of Roads and Irrigation, **Twentieth Biennial Report**, 1933-34, pages 82, 84-86, 102, 112; field inspection by Demian Hess, 20 January 1990

INVENTORIED BY

Demian Hess

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: none

ADAM06

DATE(S) OF CONSTRUCTION
ca.1920

LOCATION
county road over creek; S15/22, T6N, R11W
1 mile north, 0.8 miles east of Roseland; Adams County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 12)

CONDITION
fair

OWNER
Adams County

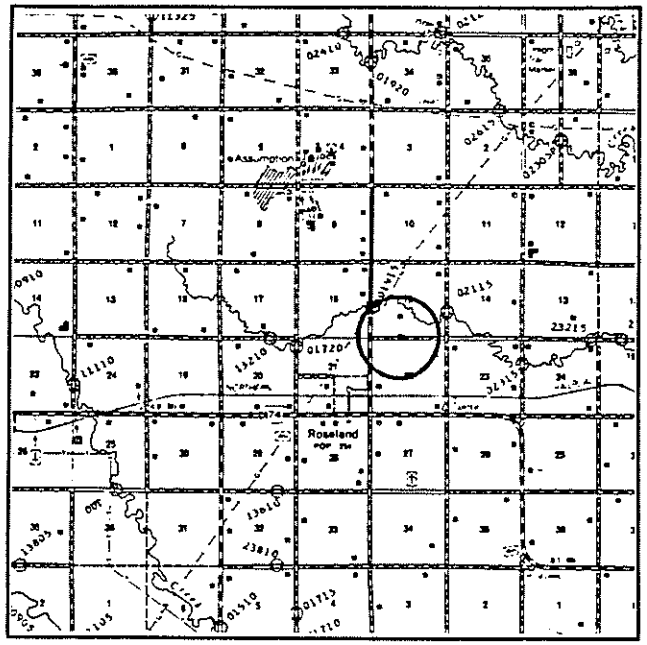
span number:	1	superstructure:	concrete, filled spandrel arch, widened by concrete slab addition
span length:	16.0'	substructure:	concrete abutments and wingwalls
total length:	17.0'	floor/decking:	earth/concrete deck
roadway wdt.:	26.0'	other features:	concrete posts detailed with recessed panel carry two rails

This bridge carries an unpaved county road over a branch of Scott Creek just northeast of Roseland. It is located on the north-south line between Sections 15 and 22, T6N, R11W, Roseland Township. As originally constructed, the structure was a single-span concrete arch with flared concrete wingwalls at each corner. Springing about three feet above grade, the arch measured about 15 feet in length and 20 feet in width. Although county records do not provide a date of construction, they do indicate that the bridge was in existence in March 1922, when it was officially inspected, apparently as a matter of routine maintenance. Since the county was building concrete bridges with 20-foot roadways as early as 1913, it is possible that the bridge dates from that period. At an undetermined date, the bridge received an eight-foot-wide, concrete-slab addition along its north elevation. Apparently at that time, the bridge also received four new wingwalls (portions of the original wing walls on the south elevation can still be seen) and the present concrete railing system consisting of two rails supported by posts detailed with a recessed panel. The loss of rails along the south elevation adversely affects the bridge's integrity.

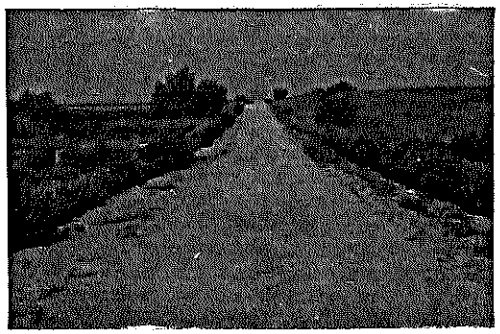
The bridge's integrity is adversely affected by the loss of rails in the railing along the south elevation. The bridge's importance as an early concrete-arch structure is also significantly diminished by the concrete-slab addition.

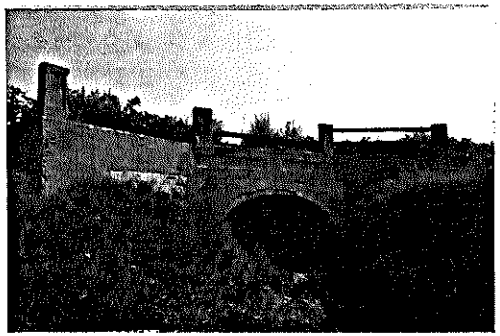
NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Proceedings of the Adams County Commissioners, 1911-1928, located in Adams County Courthouse, Hastings, Nebraska; Bridge Cost Record, volume 1, listing for Bridge Number 273, 10 March 1922, located in Adams County Courthouse; field inspection by Jeffrey A. Hess, 20 July 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Merritt Bridge [Elkhorn Cut-off Bridge] ANTE01
NDOR: C000202705P

DATE(S) OF CONSTRUCTION
1912

LOCATION
county highway over Elkhorn River Cut-off; S20, T25N, R6W
0.2 mile south of Neligh; Antelope County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 37)

CONDITION
good

OWNER
Antelope County

span number: 3
span length: 60.0'
total length: 305.0'
roadway wdt.: 19.2'

superstructure: steel, 4-panel, pin-connected Pratt pony truss with 2 rigid-connected Pratt pony approaches
substructure: concrete abutments with wingwalls and I-beam piers
floor/decking: timber deck over I-beam stringers
other features: upper chord: 2 channels with cover and batten plates; lower chord: looped rectangular eye-bars; vertical: paired angles with lacing; diagonal: round eyerods; floor beam: I-beam, field bolted to vertical; lateral bracing: round rod with threaded ends; guardrail: 2 angles; endpost-mounted builder's plate: **Built by the Western Bridge & Construction Company Omaha, Neb.**

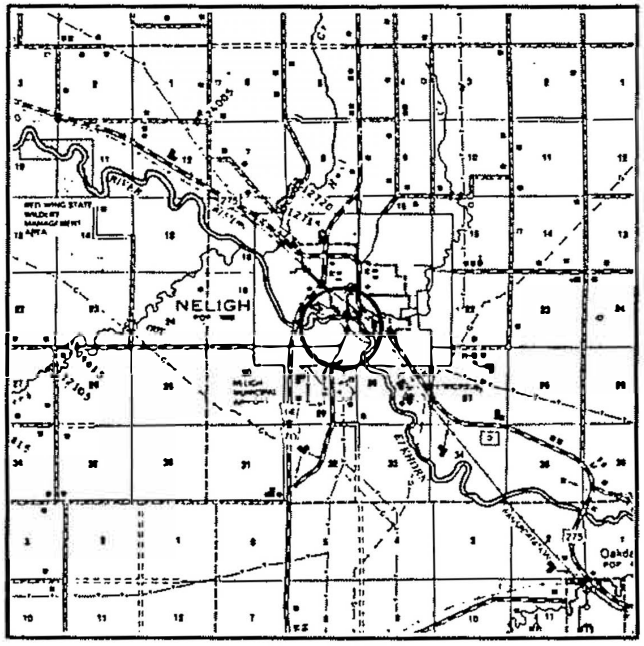
The Merritt Bridge carries a county road across an overflow channel of the Elkhorn River at the southern periphery of Neligh, the Antelope County seat. Although not on the river's main channel, this crossing historically posed a continuing problem for Antelope County officials. The local newspaper began asking what was going to be done at this location as soon as a new iron bridge was constructed across the main channel of the Elkhorn River just north of this location in 1884. The editor stated that the area had an "ugly look." The earliest timber pile bridges at this location washed out annually and were replaced with successively longer structures, and, no doubt, the dam at the Neligh Mills across the main channel of the river either caused or compounded the annual problem. In 1912, two years after the county erected a steel bridge over the Elkhorn at the mill site, the county commissioners contracted with the Western Bridge and Construction Company of Omaha for a 60-foot pinned Pratt pony truss at the Merritt crossing. Using steel rolled by Cambria, Western Bridge completed the Merritt Bridge later that year for $3798. The overflow channel must have shifted, because the county later added two rigid-connected Pratt pony trusses to the original span. This three-span configuration forms the Merritt Bridge today.

The history of the Merritt Bridge is integrally tied with the Neligh Mill Bridge (**ANTE02**). The Merritt Bridge is historically significant in Antelope County for its association with an important crossing of a branch of the Elkhorn River. The first bridge constructed in the county across the Elkhorn River was just to the north of this location, and that bridge served to tie the northern and southern portions of the county together. But unlike the Neligh Mill Bridge, the Merritt Bridge has suffered extensive later alterations. What was once a single-span structure is now a three-span bridge made up of dissimilar trusses. This loss of integrity substantially diminishes the bridge's interpretive value.

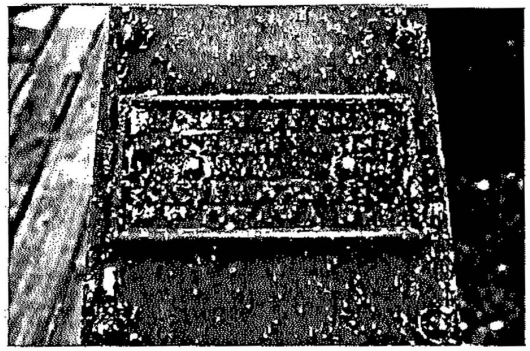
NAME(S) OF STRUCTURE

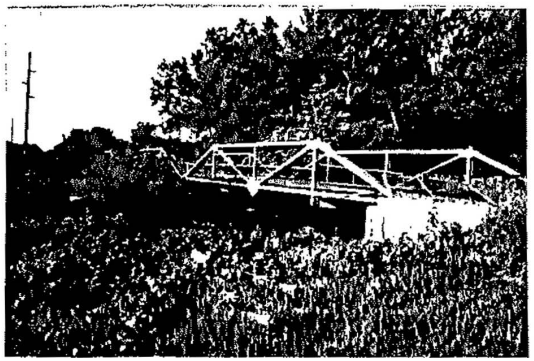
Merritt Bridge [Elkhorn Cut-off Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C000202705P; Antelope County Supervisors' Record, Book E: 9 January 1912 (page 97), located at the Antelope County Courthouse, Neligh, Nebraska; "Bridge No. 1, Neligh Township," Bridge Record, located at the Antelope County Courthouse, Neligh, Nebraska; "Chronological History of the Neligh Mill," compiled from the Neligh Newspapers (Neligh Mill Historical Site, 1977-1978), see May 2, 1894, May 20, 1892; builder's plate on bridge; field inspection by Lon Johnson, 26 July 1989.

INVENTORIED BY	AFFILIATION	DATE
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Neligh Mill Bridge [Elm Street Bridge; Elkhorn River Bridge] ANTE02
NDOR: C000202710P

DATE(S) OF CONSTRUCTION
1910

LOCATION
Elm Street over the Elkhorn River; S20, T25N, R6W
Neligh; Antelope County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / highway bridge

RATING potentially NRHP eligible (score: 50)

CONDITION
good

OWNER
Antelope County

span number:	1	superstructure:	steel, 8-panel, pin-connected Pratt through truss
span length:	140.0'	substructure:	concrete-filled steel cylinder piers with plank backwalls
total length:	145.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	17.3'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: forged eye-bars, except at the first two panels either end, paired channel sections with lacing bars; vertical: paired angle sections with lacing bars; diagonal: rectangular bars; counters: rods; portal bracing and struts: paired angles; floor beam: I-beam; top and bottom lateral bracing: rods; guardrails: 2 channels; endpost-mounted builder's plate: **Built by the Western Bridge & Construction Company Omaha, Neb.**

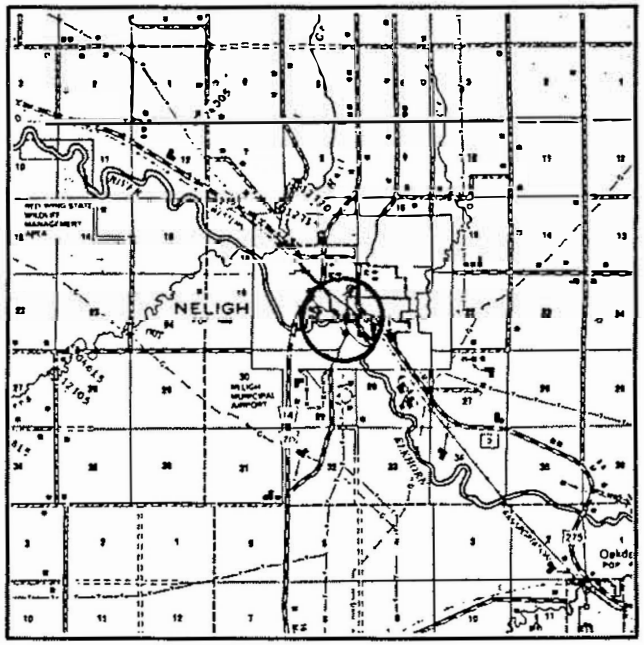
John Neligh began construction of his water-powered merchant mill on the north bank of the Elkhorn River in 1873, shortly after platting the town of Neligh. He sold the unfinished millworks to William Gallaway the next year, and Gallaway completed the operation soon thereafter. As it expanded operations steadily in the 1870s and early 1880s, the mill formed a focal point for the town and Antelope County. Early in 1884 the Antelope County Commissioners acted to replace the existing wagon bridge across the Elkhorn River at the foot of Elm Street near the mill. They first advertised for a timber/iron combination span, then changed to an all-iron span, then in February awarded a contract for the bridge to B.F. Parks, then cancelled the contract when Parks failed to perform adequately. Finally, in March 1884, the county contracted with the King Iron Bridge Company of Cleveland to erect a 112-foot iron Pratt through truss at the Neligh Mill crossing. The 1884 truss carried traffic for 26 years before the county moved to replace it early in 1910. The commissioners at that time ordered a 140-foot, pinned Pratt through truss from the Western Bridge and Construction Company of Omaha, which held the county's annual contract for 1910. Western Bridge built the steel cylinder piers and completed the truss by May 1910. The Neligh Mill Bridge has carried traffic since, in essentially unaltered condition.

Now owned and restored by the Nebraska Historical Society, the Neligh Mill is one of the state's more interesting historical sites, and the Neligh Mill Bridge accrues a degree of significance and site integrity for its association with and proximity to the mill complex. Located at the southern periphery of Neligh, the county seat, this crossing has proved to be regionally important - the first bridge in the county over the Elkhorn River and reportedly the first bridge over the river west of Norfolk - that served to link the north and south halves of Antelope County. The Neligh Mill Bridge is technologically noteworthy as an early, well-preserved example of the pinned Pratt through truss: a mainstay structural type for wagon bridges built throughout Nebraska between the 1880s and the 1920s.

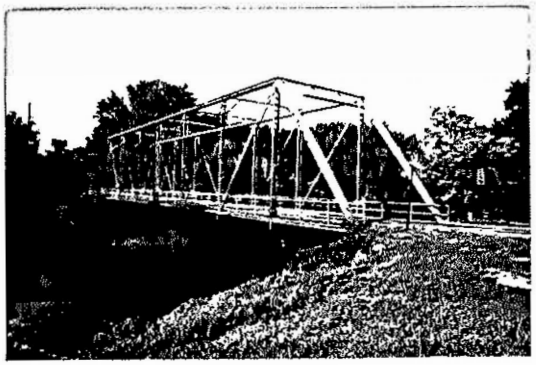
NAME(S) OF STRUCTURE

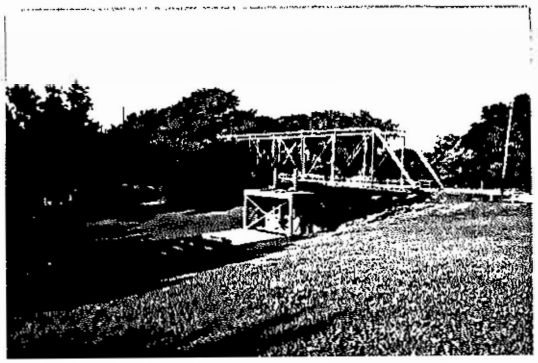
Neligh Mill Bridge [Elm Street Bridge; Elkhorn River Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C000202710P; Antelope County Commissioners' Record, Book A: 18 January 1884 (page 429); Book B: 27 February 1884 (page 1), 14 March 1884 (page 5), 17 June 1884 (page 20); Book E: 17 May 1910 (page 28), located at the Antelope County Courthouse, Neligh, Nebraska; "Bridge No. 2, Neligh Township," Bridge Record, located at the Antelope County Courthouse, Neligh, Nebraska; Thomas R. Buecker, **Water Powered Flour Mills in Nebraska**, (Lincoln: Nebraska State Historical Society, 1983), p. 65; Antelope County Historical Society, **The History of Antelope County Nebraska: 1865-1985**, (no place: Curtis Media Corporation, 1986), n.p.; A.J. Leach, **A History of Antelope County, Nebraska**, (Chicago: The Lakeside Press), pp. 138-139; field inspection by Lon Johnson, 27 July 1989.

INVENTORIED BY	**AFFILIATION**	**DATE**
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Derry Bridge [Cedar Creek Bridge] ANTE03
NDOR: C000203305

DATE(S) OF CONSTRUCTION
1911

LOCATION
township road over Cedar Creek; S10/11, T23N, R6W
6.2 miles southwest of Oakdale; Antelope County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 35)

CONDITION
good

OWNER
Antelope County

span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt pony truss
span length:	50.0'	substructure:	steel pile bent abutments with timber wingwalls
total length:	51.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	14.2'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: looped rectangular eye-bars; vertical: paired angles with lacing; diagonal: round eyerods; floor beam: I-beam, feld bolted to vertical; lateral bracing: round rod with threaded ends; guardrail: 2 angles; endpost-mounted builder's plate: **Built by the Western Bridge & Construction Company Omaha, Neb.**

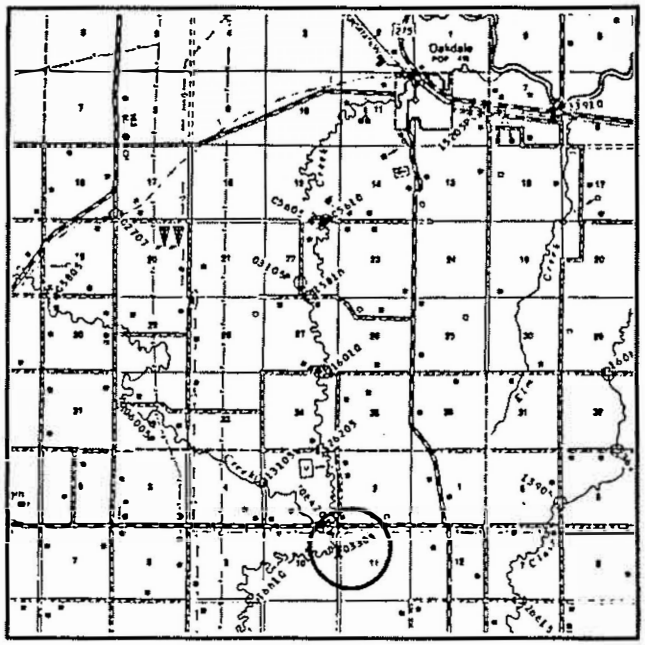
In March 1911 the Western Bridge and Construction Company was awarded an annual contract to erect Antelope County's bridges, as it had in the previous three years. One of the small-scale steel structures erected by the Omaha-based firm was this pinned Pratt pony truss across Cedar Creek some six miles southwest of Oakdale, in south-central Antelope County. Comprised of steel components rolled by Lackawanna, the Derry Bridge, as it was called, was fabricated from a standard design by the state engineer's office. Western Bridge built the steel pile bent abutments and erected the bridge in 1911 for $1149.00. The Derry Bridge has carried traffic since, in essentially unaltered condition.

The Derry Bridge typifies short-span truss construction in Nebraska in the early 1900s. Built from state standard plans by one of the state's most prolific bridge erectors during a period of intense construction activity, it fits well within the mainstream of technological trends for the period. Lacking any major historical significance in its present location and typifying an exceedingly common structural type for Nebraska, the Derry Bridge lacks an appreciable level of significance.

NAME(S) OF STRUCTURE

Derry Bridge [Cedar Creek Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C000203305; Antelope County Supervisors' Record, 7 March 1911 (page 65), located at Antelope County Courthouse, Neligh, Nebraska; "Bridge No. 5, Cedar Township", Bridge Record, located at Antelope County Courthouse, Neligh, Nebraska; builder's plate on bridge; field inspection by Lon Johnson, 27 July 1989.

INVENTORIED BY	AFFILIATION	DATE
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Ives Creek Bridge
NDOR: C000204505

ANTE04

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
township road over Ives Creek; S10/11, T24N, R5W
5.0 miles east of Oakdale; Antelope County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 29)

CONDITION
fair

OWNER
Antelope County

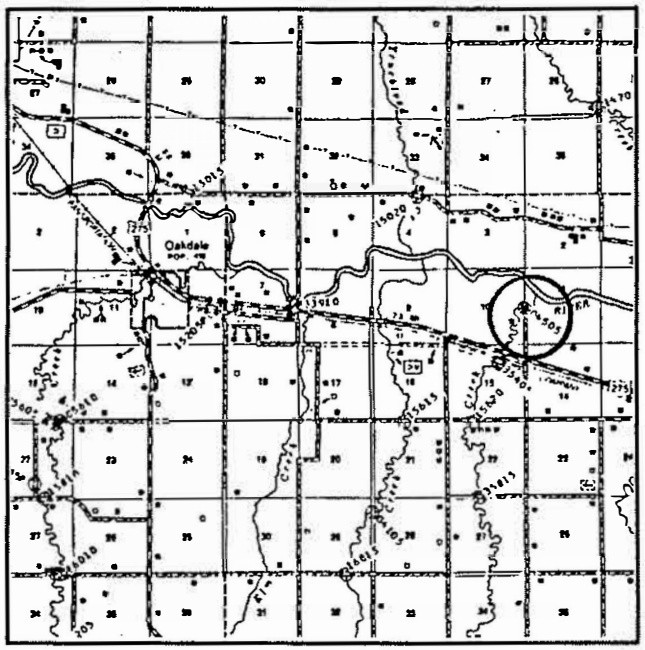
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt half-hip pony truss
span length:	47.0'	substructure:	steel pile bent abutments with timber wingwalls
total length:	48.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	16.0'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: forged eye-bars; vertical: paired angles with lacing; diagonal: square rod; counters: rod; floor beam: I-beam; lateral bracing: rod; guardrails: none

This small-scale bridge carries a gravel-surfaced road across Ives Creek, five miles east of Oakdale. The structure consists of a single pinned Pratt half-hip pony truss, supported by steel pile bent abutments. Although Antelope County records do not mention this structure specifically, the truss's detailing and dimensions suggest a fabrication date around 1910. This 1910 date would be the latest that the bridge could have been erected, because Antelope County first adopted the state engineer's standards - which do not include Pratt half-hip pony trusses - early in 1911. The Western Bridge and Construction Company of Omaha held the county's annual bridge contracts from 1908 through the 1920s. Made up of steel components rolled by Jones and Laughlin, this truss displays the earmarks of a Western Bridge Company structure. Essentially unaltered, it retains an average degree of physical integrity.

Most midwestern bridge erectors marketed the Pratt half-hip pony truss extensively in the early 1900s. Lacking a vertical at the hip connection, it was slightly lighter - and thus cheaper to fabricate - than the standard Pratt truss. The state engineer's office did not adopt the half-hip design as a state standard, however, and as counties such as Antelope County began using the state standards increasingly in the mid-1910s, erection of half-hip ponies decreased rapidly. Nevertheless, numerous half-hip trusses remain in use on Nebraska's secondary roads today. With its construction history largely undocumented, the Ives Creek Bridge is not one of the more noteworthy examples.

NAME(S) OF STRUCTURE
Ives Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C000204505; field inspection by Lon Johnson, 27 July 1989.

INVENTORIED BY	AFFILIATION	DATE
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Cedar Creek Bridge
NDOR: C000205610

ANTE05

DATE(S) OF CONSTRUCTION
$1958.00 (two bridges)

LOCATION
township road over Cedar Creek; S15/22, T24N, R6W
2.1 miles southwest of Oakdale; Antelope County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 33)

CONDITION
good

OWNER
Antelope County

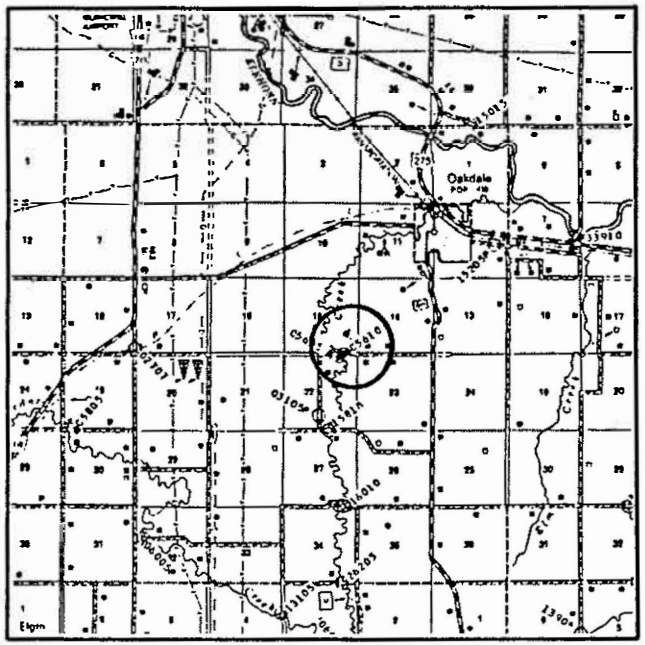
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt pony truss
span length:	40.0'	substructure:	steel pile bent abutments with sheet piling back- and wingwalls
total length:	41.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.8'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: forged eye-bars; vertical: 2 pair angles with lacing; diagonal: round rods; floor beam: I-beam; lateral bracing: round rod; guardrails: 2 angles

In March 1911 the Western Bridge Company was awarded an annual contract to erect Antelope County's bridges, as it had in the previous three years. One of the small-scale steel structures erected by the Omaha-based firm was this pinned Pratt pony truss across Cedar Creek some two miles southwest of Oakdale, in south-central Antelope County. Comprised of steel components rolled by Cambria, the Cedar Creek Bridge was fabricated from a standard design by the state engineer's office. Western Bridge built the steel pile bent abutments and erected this bridge and another in 1911 for $1958.00. The Cedar Creek Bridge has carried traffic since, in essentially unaltered condition.

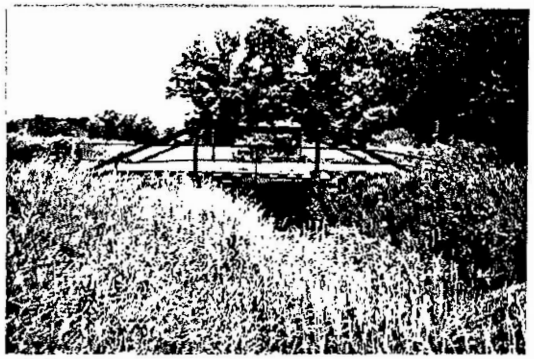
Like most of Nebraska's counties, Antelope County adopted the standard plans developed by the state engineer's office in the early 1910s. (In Antelope County's case, the commissioners first employed the plans in 1911.) Thousands of such state-standard trusses were erected during this period, and many remain in use today. Built in 1911 by one of Nebraska's most prolific bridge erectors, the Cedar Creek Bridge falls within the mainstream of this construction trend. The bridge displays typical features and dimensions and lacks any superlative attributes.

NAME(S) OF STRUCTURE
Cedar Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C000205610; Antelope County Supervisors' Record: 7 March 1911 (page 65), located at the Antelope County Courthouse, Neligh, Nebraska; Antelope County Bridge Record: Bridge No. 7, Oakdale Township, located at the Antelope County Courthouse, Neligh, Nebraska; field inspection by Lon Johnson, 26 July 1989.

INVENTORIED BY	AFFILIATION	DATE
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C000212505

ANTE06

DATE(S) OF CONSTRUCTION
1911

LOCATION
township road over unnamed stream; S12, T28N, R7W
6.8 miles northeast of Royal; Antelope County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 55)

CONDITION
fair

OWNER
Antelope County

span number:	1	superstructure:	steel, pin- / rigid-connected kingpost pony truss
span length:	30.0'	substructure:	wood piles with concrete infill
total length:	32.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	16.0'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 looped eyebars; vertical: 2 angles with lacing; floor beam: I-beam; lateral bracing: round rod with threaded ends; guardrail: 2 angles; endpost-mounted builder's plate: **Built by the Western Bridge & Construction Company Omaha, Neb.**

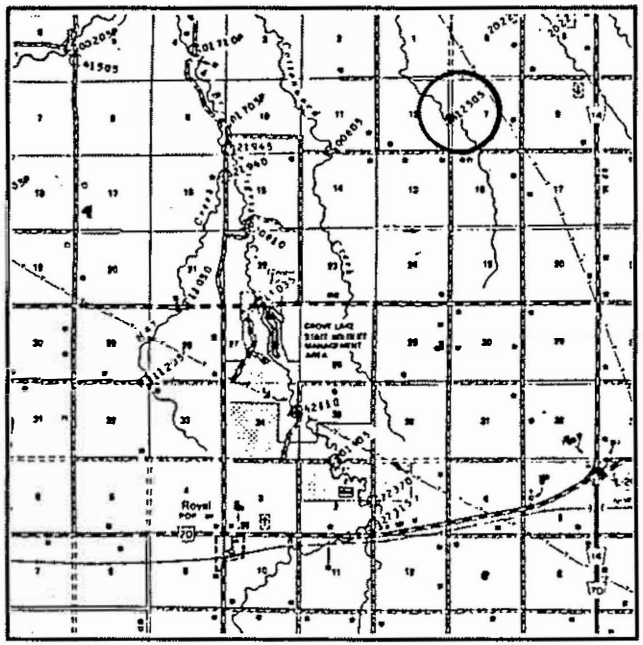
In March 1911 the Western Bridge and Construction Company was awarded an annual contract to erect Antelope County's bridges, as it had in the previous three years. One of the small-scale steel structures erected by the Omaha-based firm was this kingpost pony truss across an intermittent stream almost seven miles northeast of Royal, in north-central Antelope County. Comprised of steel components rolled by Lackawanna, the bridge featured a rigid-connected upper chord connection and pinned lower chords. Western Bridge built the steel pile bent abutments and erected this bridge in 1911 for $1149.00. This bridge has carried traffic since, in essentially unaltered condition.

With its roots extending to the Middle Ages, the kingpost pony truss is the most rudimentary truss type. Numerous kingposts were built on Nebraska's early roads in the late 19th and early 20th centuries, executed first as timber/iron combination structures and later in all-metal configurations. The kingpost as a structural type was limited to relatively short-span applications, however, and as steel beam bridges received widespread acceptance after the turn of the century, erection of kingpost trusses declined rapidly. This bridge in Antelope County is an unusually late example of all-steel kingpost fabrication. Its technological significance is enhanced by its well-preserved physical condition and by the fact that almost all of the once-numerous kingpost trusses in Nebraska have since been demolished. Only two kingpost trusses are known to remain on Nebraska's roads: this structure and the Verdigris Creek Bridge (**ANTE09**).

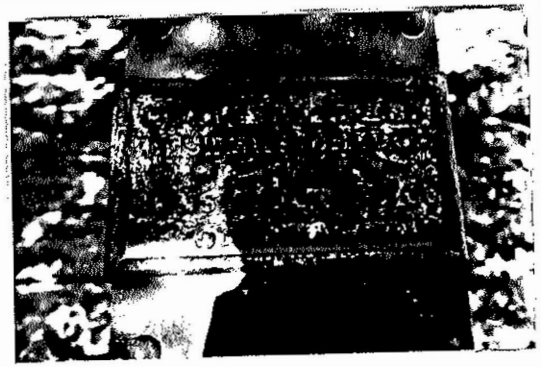
NAME(S) OF STRUCTURE

Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C000212505; Antelope County Supervisors' Record, 7 March 1911 (page 65), located at the Antelope County Courthouse, Neligh, Nebraska; "Bridge No. 6, Eden Township," Bridge Record, located at the Antelope County Courthouse, Neligh, Nebraska; builder's plate on bridge; field inspection by Lon Johnson, 27 July 1989.

INVENTORIED BY	AFFILIATION	DATE
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Clearwater Creek Bridge
NDOR: C000221305

ANTE07

DATE(S) OF CONSTRUCTION
ca.1925

LOCATION
county road over Clearwater Creek; S1, T25N, R8W
0.4 mile southeast of Clearwater; Antelope County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 22)

CONDITION
good

OWNER
Antelope County

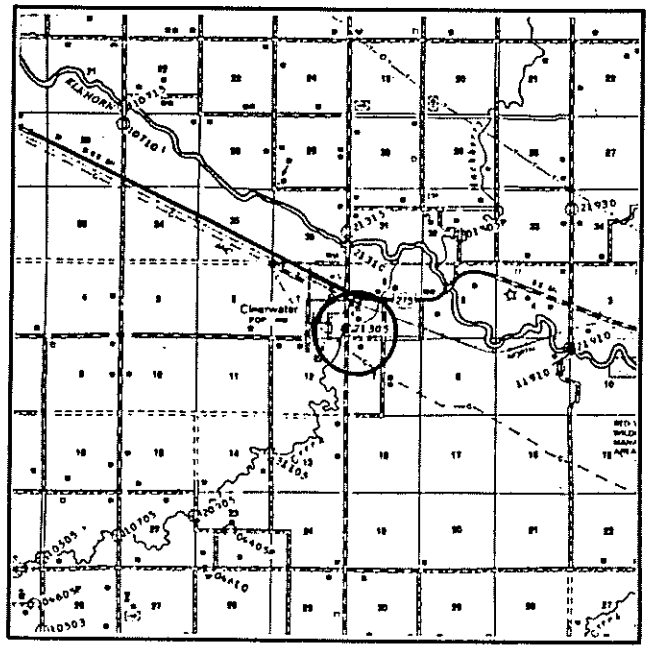
span number:	1	superstructure:	steel, 5-panel, rigid-connected Pratt pony truss, skewed
span length:	100.0'	substructure:	steel pile bent abutments with timber back- and wingwalls
total length:	101.0'	floor/decking:	concrete deck over steel stringers
roadway wdt.:	19.0'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 channels with batten plates, top & bottom; vertical: built-up I-beam; diagonal: 2 angles with batten plates; floor beam: I-beam; guardrail: 2 angles

This heavily skewed bridge carries a secondary county road across Clearwater Creek just southeast of Clearwater in western Antelope County. The structure is comprised of a single-span rigid-connected Pratt pony truss, supported by steel pile bents with timber back- and wingwalls. Comprised of steel components rolled by the Illinois Steel Company, the truss's date and builder are unknown. Based on its design features and roadway width, however, the bridge appears to have been built in the mid-1920s from standard plans delineated by the Nebraska Bureau of Roads and Bridges.

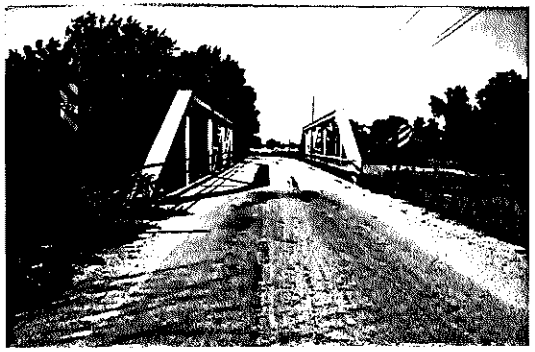
The Clearwater Creek Bridge is one of dozens of 100-foot-span riveted Pratt pony trusses identified in Nebraska by the statewide bridge inventory. Virtually all of these can be attributed to the standardized designs developed by the state engineer's office. Although the 100-foot span length is the longest developed by the state for this truss configuration (through trusses were used for longer spans), this fact is only marginally noteworthy. More significant, multi-span examples of this truss remain in use, unaltered, over the Platte River in western Nebraska. The Clearwater Creek Bridge suffers in comparison with these potentially eligible structures. As a historically undocumented, single-span example of a common structural type, carrying a secondary road over a minor watercourse, the Clearwater Creek Bridge enjoys only marginal historical and technological significance.

NAME(S) OF STRUCTURE
Clearwater Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C000221305; field inspection by Lon Johnson, 27 July 1989.

INVENTORIED BY	AFFILIATION	DATE
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Elkhorn River Bridge [Singing Bridge; Krumm Bridge] ANTE08
NDOR: C000221910

DATE(S) OF CONSTRUCTION
1883; moved 1929

LOCATION
township Road over the Elkhorn River; S9/10, T25N, R7W
roadway bridge / roadway bridge
3.0 miles east of Clearwater; Antelope County, Nebraska

USE (ORIGINAL / CURRENT)

RATING NRHP eligible (score: 58)

CONDITION
fair

OWNER
Antelope County

span number: 1
span length: 98.0'
total length: 135.0'
roadway wdt.: 13.0'

superstructure: wrought iron, 8-panel bowstring through arch-truss
substructure: steel pile bent pier and abutments, with timber back- and wingwalls
floor/decking: timber deck over steel stringers
other features: upper arch chord: 2 channels with cover plates each side; bottom chord: 2 rectangular eyebars; vertical: 2 T-sections with lacing, pipe at mid-span; diagonal: round rods with threaded ends; strut: pipe; floor beam: jack-trussed beams (two channels trussed with tension rods and separated by a pair of channel sections); lateral bracing: round rod with turnbuckle; guardrail: pipe

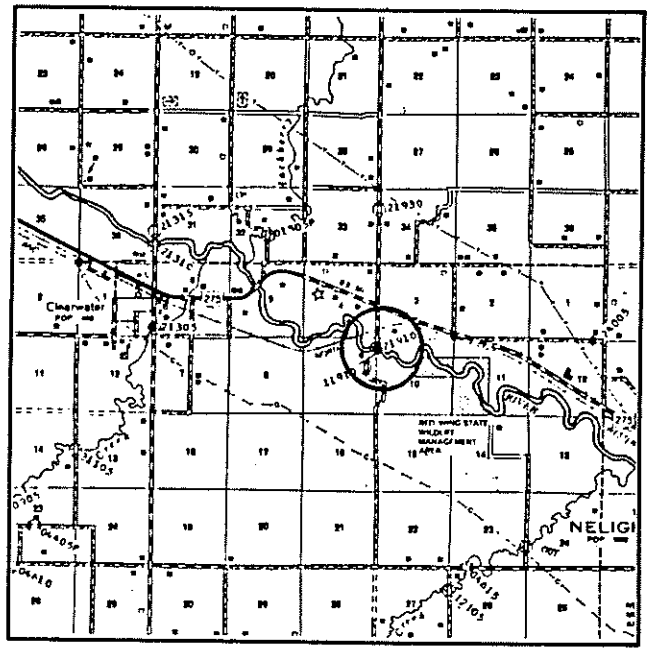
On February 8, 1883, the Antelope County Commissioners contracted with the King Iron Bridge Company to build an eight-panel, tubular arch bridge across the Elkhorn River just northeast of Clearwater on road 48. King began work at once, completing the project late that spring for a total cost of $2050. For this crossing the Cleveland-based bridge company erected a 98-foot bowstring through arch-truss, fabricated from King's patented standard tubular arch design. On June 18, 1883, county officials inspected and accepted the new span; the bridge carried wagon traffic with only minimal repairs for nearly thirty years, until the summer of 1912. That July the Western Bridge and Construction Company of Omaha replaced the bridge's original timber stringers with steel stringers. County records are vague regarding when the bridge was moved to its present location, but Creighton resident Albert Bonge remembers that the move took place in the fall of 1929. In a May 1990 interview with the **Norfolk Daily News**, Bonge reported that he worked as a hoist operator for Western Bridge, and that he and a five-man crew moved the bridge about five miles to its present site. In its new location, the bridge replaced a timber structure built ca.1890, known as the Krumm [Crum] Bridge. In recent years the bowstring truss has become known locally as the "Singing Bridge" because when it is crossed, its truss members emit a singing sound. In 1990 a new replacement bridge was built 100 yards upstream, so the old bowstring no longer carries mainline traffic. It is being preserved in place.

Marketed widely throughout the Midwest by such industry giants as the King Iron Bridge Company and the Wrought Iron Bridge Company, bowstring arch-trusses were the mainstay bridge type for medium-span roadway crossings in the 1870s, 1880s and early 1890s. Several bowstrings were erected in eastern Nebraska during that period, but through subsequent attrition only a handful remains today. Most of these were erected by King in the 1880s and 1890s. The Elkhorn River Bridge is historically significant as the first all-iron vehicular span erected in Antelope County. It is technologically significant as one of the last remaining examples in the state of this once-common, important early bridge type.

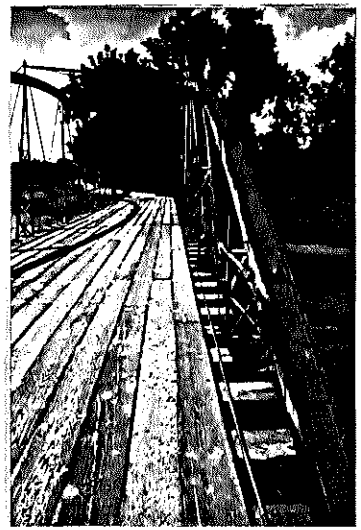
NAME(S) OF STRUCTURE

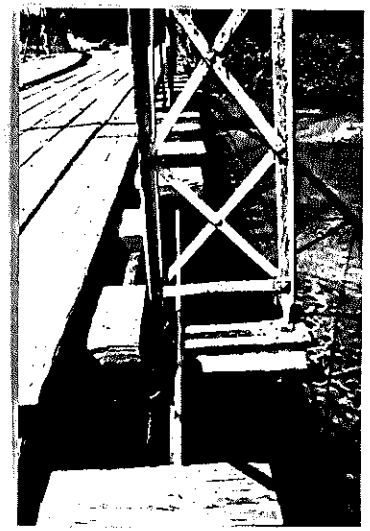
Elkhorn River Bridge [Singing Bridge; Krumm Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C000221910; Antelope County Commissioners' Record, Book A: 8 February 1883, 18 June 1883 (page 422); Book E: 9 July 1912 (page 123) located at Antelope County Courthouse, Neligh, Nebraska; "Bridge No. 11, Ord Township", Antelope County Bridge Record, n.d. (includes maintenance notations for Crum Bridge circa 1915-1918) located at Antelope County Courthouse, Neligh, Nebraska; A.J. Leach, **A History of Antelope County, Nebraska**, [1868-1883] (Chicago: The Lakeside Press, 1909), pp. 138-139; "Old Bridge To Continue Singing Its Song," **Norfolk Daily News**, 26 April 1990, pp. 1-2; "Bridge Mystery - Man Resolves Questions," **Norfolk Daily News**, 15 May 1990, pp. 2, 10; field inspection by Lon Johnson, 26 July 1989.

INVENTORIED BY	**AFFILIATION**	**DATE**
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Verdigris Creek Bridge
NDOR: C000242110

ANTE09

DATE(S) OF CONSTRUCTION
ca.1918

LOCATION
township road over Verdigris Creek; S34/35, T28N, R7W
1.9 miles northeast of Royal; Antelope County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 45)

CONDITION
good

OWNER
Antelope County

span number:	1	superstructure:	steel, rigid-connected kingpost pony truss with I-beam approach span
span length:	30.0'	substructure:	steel piles bent abutments and pier with timber back- and wingwalls
total length:	64.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.3'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 angles with batten plates; vertical: 2 angles with batten plates; floor beam: I-beam; lateral bracing: rods; guardrails: 2 angles

Located some two miles northeast of Royal, this small-scale bridge carries an unpaved county road over Verdigris Creek. The structure consists of a single rigid-connected kingpost pony truss, with a steel stringer approach span on one side. Steel pile bents form the substructure. The bridge's design, dimensions and its rigid-connected technology suggest a construction date of ca.1918. It was probably built by the Western Bridge and Construction Company, which appears to have constructed all of Antelope County's steel bridges between 1907 and the 1920s. The Verdigris Creek Bridge is structurally unaltered, and it retains a high degree of physical integrity.

With its roots extending to the Middle Ages, the kingpost pony truss is the most rudimentary truss type. Numerous kingposts were built on Nebraska's early roads in the late 19th and early 20th centuries, executed first as timber/iron combination structures and later in all-metal configurations. The kingpost as a structural type was limited to relatively short-span applications, however, and as steel beam bridges received widespread acceptance after the turn of the century, erection of kingpost trusses declined rapidly. This bridge in Antelope County is an unusually late example of all-steel kingpost fabrication. With its construction history largely undocumented, its interpretive value is diminished, however. Nevertheless, the bridge's technological significance is enhanced by its well-preserved physical condition and by the fact that almost all of the once-numerous kingpost trusses in Nebraska have since been demolished. Only two kingpost trusses are known to remain on Nebraska's roads: this structure and another Antelope County span (**ANTE06**).

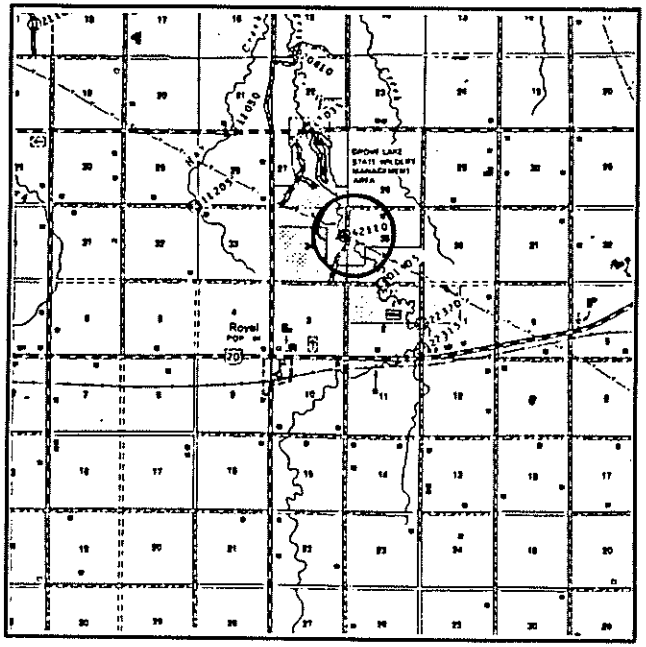
INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

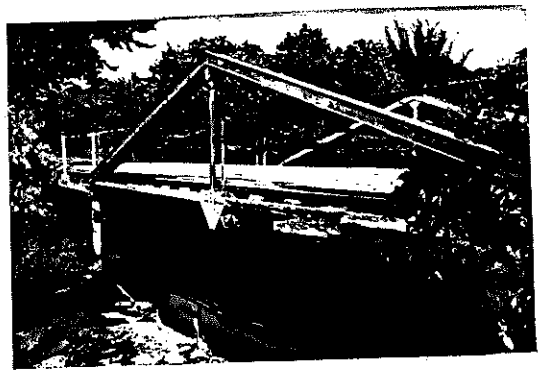
DATE
15 January 1991

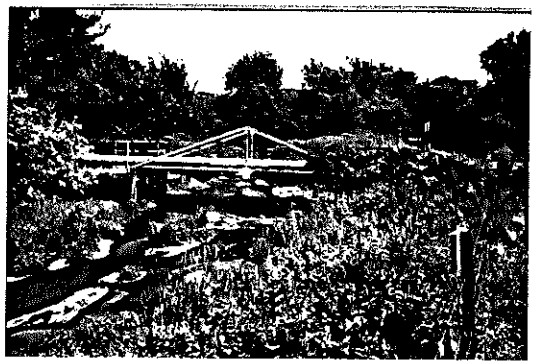
NAME(S) OF STRUCTURE
Verdigris Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C000242110; field inspection by Lon Johnson, 26 July 1989.

INVENTORIED BY	AFFILIATION	DATE
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
North Shell Creek Bridge
NDOR: C000600825

BOON01

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
county road over North Shell Creek; S22, T22N, R5W
9.3 miles east of Raeville; Boone County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 28)

CONDITION
fair

OWNER
Boone County

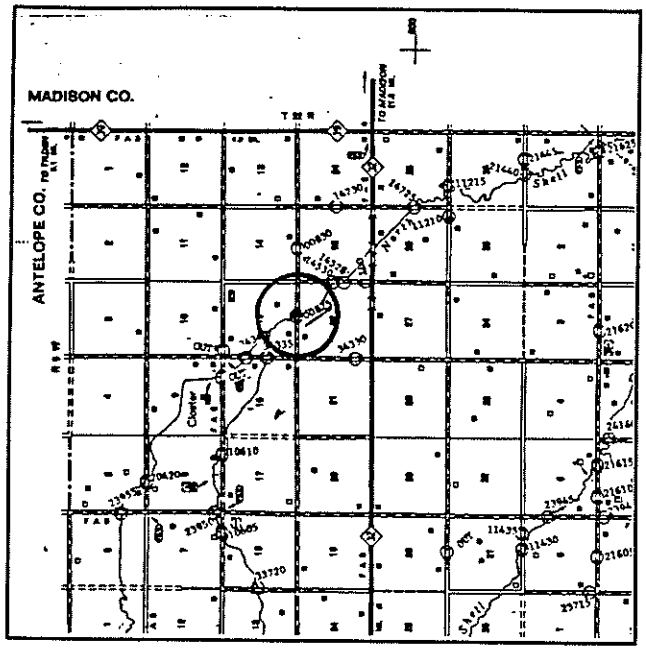
span number:	1	superstructure:	steel, 5-panel, pin-connected Pratt pony truss
span length:	75.0'	substructure:	steel pile bent abutments with timber wingwalls
total length:	75.0'	floor/decking:	timber decking over steel stringers
roadway wdt.:	15.6'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 punched rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 punched rectangular eyebars; lateral bracing: round bar with threaded ends; floor beam: I-beam, field bolted to vertical; guardrail: 2 angles

Located slightly more than a mile south of the small settlement of Closter, in northeastern Boone County, this small-scale pony truss carries a gravel-surfaced section-line road over North Shell Creek. Comprised of steel components rolled by the Cambria steel mills in Pittsburgh, the details and dimensions of the truss indicate a fabrication date of ca.1915, a period in which the Boone County Commissioners were awarding annual bridge construction contracts to the Western Bridge and Construction Company of Omaha. The North Shell Creek Bridge displays the typical pin-connected configuration and detailing of Western Bridge's standardized trusses.

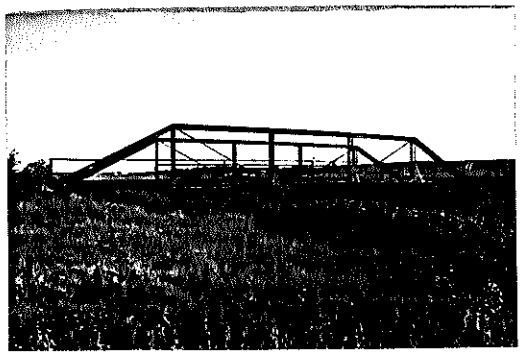
Marketed extensively by virtually all of the in-state bridge contractors and promoted in the form of standardized designs by the Nebraska State Engineer's office, the pinned Pratt pony truss was used widely by Nebraska's counties to carry roads over the state's myriad small streams. The Western Bridge and Construction Company of Omaha was one of Nebraska's two largest purveyors of steel spans (the Standard Bridge Company formed its chief competition). Western alone erected thousands of such short-span trusses throughout the state in the first two decades of the 20th century. The North Shell Creek Bridge typifies this construction trend. A 75-foot Pratt truss erected ca.1915, it fits well within the milieu of Nebraska roadway bridge construction.

NAME(S) OF STRUCTURE
North Shell Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C000600825; Boone County Commissioners' Record, refer to the following entries in Book 4: 14 January 1913 (page 340), 5 January 1914 (page 379), 2 February 1914 (page 386), 2 September 1914 (page 411), 1 December 1914 (page 425), 4 May 1915 (page 449), 16 August 1915 (page 469), 5 October 1915 (page 474), December 1915 (page 487), 1 March 1916 (page 498), located at Boone County Courthouse, Albion, Nebraska; field inspection by Clayton Fraser, 28 September 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Beaver Creek Bridge
NDOR: C000603405P

BOON02

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over Beaver Creek; S26 T20N, R6W
2.1 miles southeast of Albion; Boone County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 32)

CONDITION
fair

OWNER
Boone County

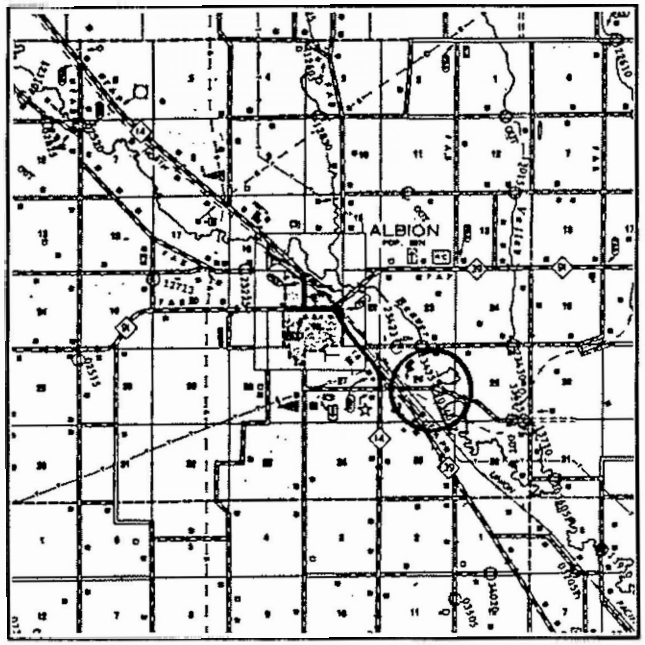
span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt pony truss
span length:	70.0'	substructure:	steel pile bent abutments with timber wingwalls
total length:	70.0'	floor/decking:	timber decking over steel stringers
roadway wdt.:	13.6'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 looped rectangular eyebars; lateral bracing: round bar with threaded ends; floor beam: I-beam, U-bolted to vertical; guardrail: 2 angles

This single-span pony truss carries a gravel-surfaced county road over Beaver Creek approximately two miles southeast of Albion. Boone County Commissioners' Records of the period do not mention this bridge specifically, but they do indicate that between 1908 - the year the county began constructing steel bridges - and the mid-1920s, Boone County contracted exclusively with the Western Bridge and Construction Company of Omaha for its steel spans. In September 1910 the county commissioners paid Western Bridge $2000.00 for unspecified bridge work. Four months later, in January 1911, Boone County issued two more warrants totaling $2231.96 to Western Bridge for the erection of two steel bridges. One of these expenditures was very likely for the construction of this four-panel Pratt pony truss. Supported by steel pile bent abutments and comprised of standard steel sections rolled by Cambria in Pittsburgh, the small-scale structure features standard pin-connected configuration and detailing and enjoys an average degree of physical integrity.

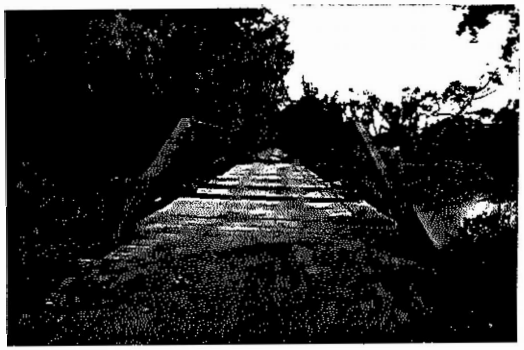
Built by one of Nebraska's most prolific bridge contractors, the Beaver Creek Bridge is a typical example of the state's most common truss configuration.

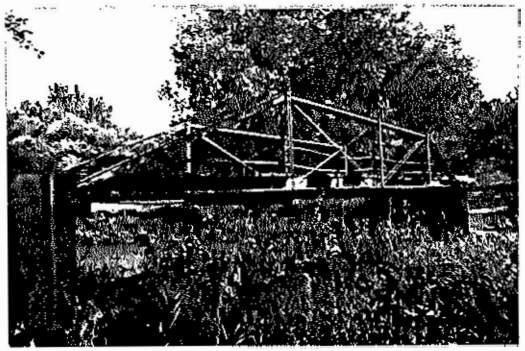
NAME(S) OF STRUCTURE
Beaver Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C000603405P; Boone County Commissioners' Record, refer to the following entries in Book 4: 6 October 1908 (page 90), 1 July 1909 (page 125), 1 September 1910 (page 190), 10 January 1911 (page 216), 17 January 1911 (page 217), 1 June 1911 (page 232), 14 January 1913 (page 340), 5 January 1914 (page 379), located at Boone County Courthouse, Albion, Nebraska; field inspection by Clayton Fraser, 28 September 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Beaver Creek Bridge
NDOR: C000603905P

BOON03

DATE(S) OF CONSTRUCTION
ca.1917

LOCATION
county road over Beaver Creek; S8, T19N, R5W
0.2 mile east of Boone; Boone County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 34)

CONDITION
fair

OWNER
Boone County

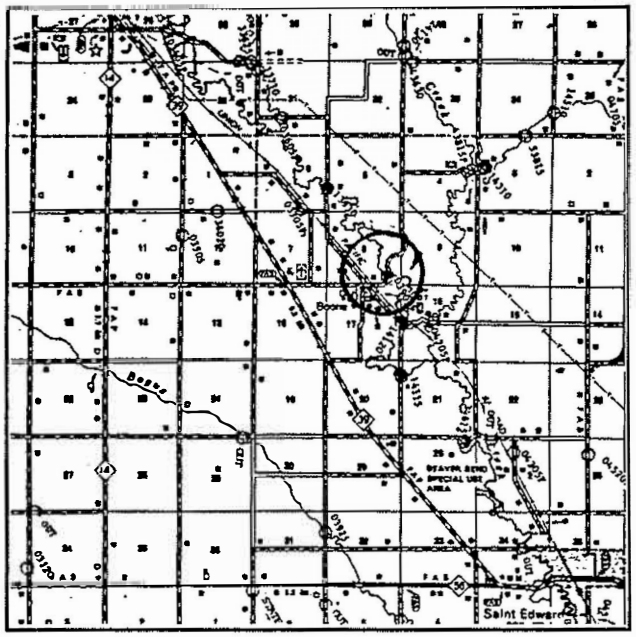
span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt pony truss
span length:	60.0'	substructure:	concrete abutments and wingwalls
total length:	62.0'	floor/decking:	timber decking over steel stringers
roadway wdt.:	15.8'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars; vertical: 4 angles with lacing; vertical: 2 looped rectangular eyebars; floor beam: I-beam, field bolted to vertical; guardrail: 2 angles; endpost-mounted builder's plate: Built by the Western Bridge & Construction Co., Omaha Neb.

Located less than one-half mile east of the small town of Boone, this pin-connected pony truss carries an unpaved county road over Beaver Creek in southeastern Boone County. A builder's plate on the truss's endpost identifies the contractor as the Western Bridge and Construction Company of Omaha (Boone County's exclusive steel bridge contractor through the 1910s and 1920s). Although contemporary county records fail to list specific bridges in their discussion of bridge work, they do indicate extensive bridge construction activity between 1915 and 1920, virtually all of it with Western Bridge. During the early 1910s, Boone County typically built 14-foot-wide trusses on pile bent abutments; the 16-foot roadway width and concrete substructure of this truss suggests a relatively late construction date, however, probably ca. 1917. Essentially unaltered, the truss is made up of standard steel sections rolled by Cambria in Pittsburgh and displays standard configuration and detailing.

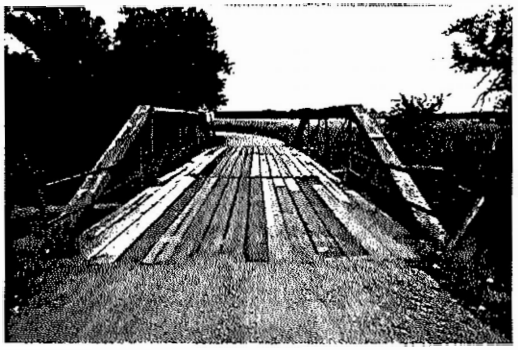
The Beaver Creek Bridge typifies short-span truss construction in Nebraska in the 1910s. Fabricated from a state standard design and built by one of the state's most prolific bridge erectors during a time of intense bridge activity, it fits well within the mainstream of technological trends for the period. Lacking any major historical significance in its present location and typifying an exceedingly common structural type in Nebraska, this bridge lacks an appreciable level of significance.

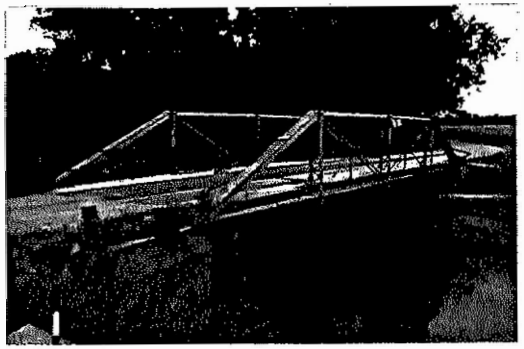
NAME(S) OF STRUCTURE
Beaver Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C000603905P; Boone County Commissioners' Record, refer to the following entries in Book 5: 1 March 1917 (page 11), 2 October 1917 (page 43), 1 November 1917 (page 49), 5 February 1918 (page 66), 2 July 1918 (page 86), 1 October 1918 (page 98), 1 April 1919 (page 127), located at Boone County Courthouse, Albion, Nebraska; field inspection by Clayton Fraser, 28 September 1989.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Cedar Rapids Bridge [Mill Bridge; Cedar River Bridge] BOON04
NDOR: C000605005P

DATE(S) OF CONSTRUCTION
1912

LOCATION
county road over Cedar River; S5, T18N, R7W
east edge of Cedar Rapids; Boone County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 50)

CONDITION
fair/poor

OWNER
Boone County

span number: 1
span length: 114.0'
total length: 172.0'
roadway wdt.: 16.0'

superstructure: steel, 7-panel, pin-/rigid-connected Pratt through truss, with steel stringer approach spans
substructure: concrete abutments, wingwalls and pier
floor/decking: concrete decking over steel stringers
other features: upper chord: 2 channels with cover plates and lacing; lower chord 2 looped rectangular eyebars; vertical: 2 channels with lacing; diagonal: 2 looped rectangular eyebars, 1 round bar with turnbuckle; lateral bracing: round bar with threaded ends; strut: 2 angles; floor beam: I-beam, field bolted to vertical; guardrail: 2 angles; endpost-mounted builder's plate: Built by the Western Bridge & Construction Co., Omaha Neb.

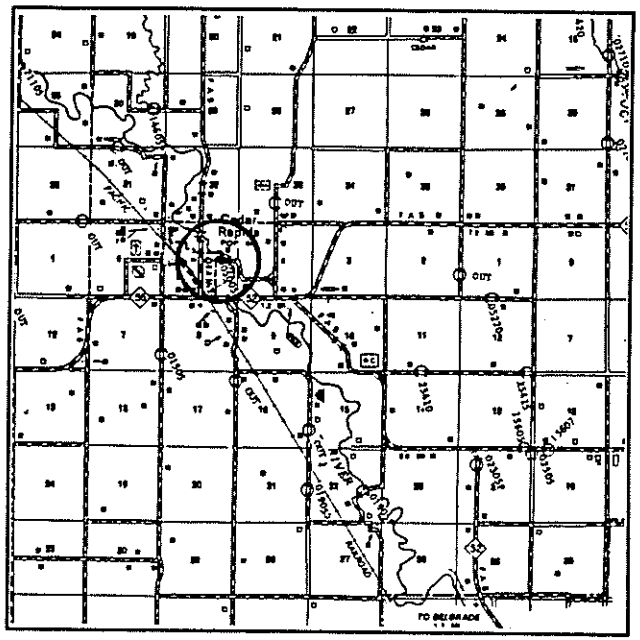
In May 1911 the Boone County Board of Commissioners applied to the State Board of Irrigation for state aid on two proposed bridges over the Cedar River near Cedar Rapids. The board soon dropped plans for one of these but continued to pursue aid for the Cedar Rapids Bridge, at the east edge of town. That year the state engineer drafted the design for the bridge and budgeted its construction at $17,000. In November construction bids were received. Irregularities in the bid process, however, forced the county to rebid the contract. When new proposals were received a month later, the commissioners deliberated at length and finally rejected all bids, ultimately withdrawing its application for state aid. In April 1912 floods destroyed the existing Cedar Rapids bridge. The crossing was strategic for farm-to-market commerce, so the county declared an emergency and contracted with the Western Bridge and Construction Company of Omaha for a replacement structure. Using steel rolled by Cambria, Western Bridge completed this medium-span through truss at the end of the year, for the total cost of $5,729. The Cedar Rapids Bridge has functioned since, with the addition of two steel stringer spans on its west approach as the only alteration of note.

Made on May 2nd, 1911, just days after the Nebraska State Legislature passed the State Aid Bridge Law, the application for the Cedar Rapids Bridge was the first ever made by a Nebraska county. Had the county pursued it, the bridge would have been among the first state aid bridges erected. But the Boone County Commissioners evidently decided that, rather than build a 175-foot-long structure under the state aid program, it would be more economical to finance a shorter bridge on its own. (Ironically, the structure's length was later extended to 172 feet by the addition of approach spans.) The Cedar Rapids Bridge is historically significant for its formative role in the state aid bridge program and for its importance to transportation in Cedar Rapids and Boone County. The structure is technologically significant as the only through truss in Boone County and among the older and better preserved of the pin-connected through trusses in Nebraska.

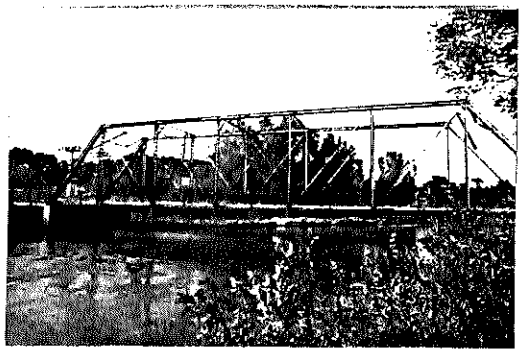
NAME(S) OF STRUCTURE

Cedar Rapids Bridge [Mill Bridge; Cedar River Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C000605005P; Boone County Commissioners' Record Book 4: 2 May 1911 (page 227), 7 May 1911 (page 231), 1 June 1911 (page 232), 25 September 1911 (page 258), 10 November 1911 (page 264), 19 December 1911 (page 273), 2 April 1912 (page 293), 14 January 1913 (page 340), located at Boone County Courthouse, Albion, Nebraska; Nebraska State Board of Irrigation, Highways and Drainage, **Ninth Biennial Report: 1910-12,** pages 58-59; field inspection by Clayton B. Fraser, 28 September 1989.

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Shell Creek Bridge
NDOR: C000612020

BOON05

DATE(S) OF CONSTRUCTION
ca.1912

LOCATION
county road over Shell Creek; S13/24, T21N, R5W
10.9 miles northeast of Albion; Boone County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 34)

CONDITION
fair

OWNER
Boone County

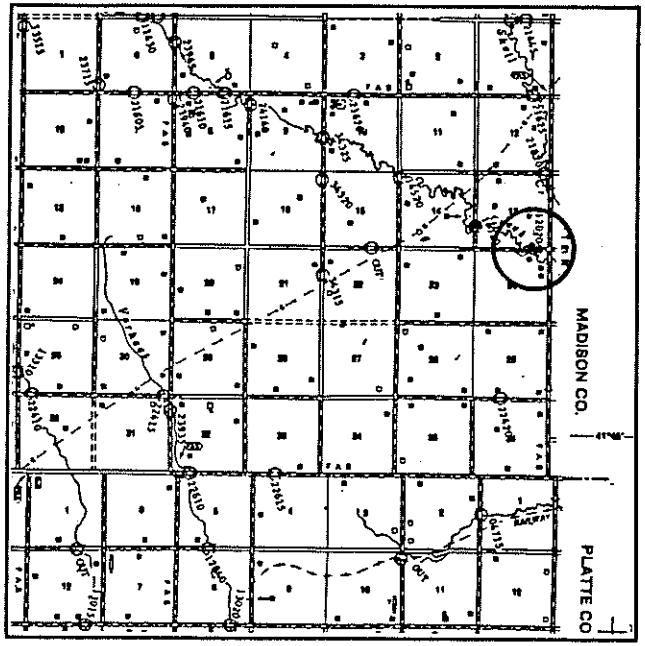
span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt pony truss
span length:	60.0'	substructure:	steel pile bent abutments with timber wingwalls
total length:	60.0'	floor/decking:	concrete deck on steel I-beam stringers
roadway wdt.:	14.2'	other features:	upper chord; 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 looped rectangular eyebars; lateral bracing: round bar with threaded ends; floor beam: I-beam, field bolted to vertical: guardrail: 2 angles; endpost-mounted builder's plate: **Built by the Western Bridge & Construction Co., Omaha Neb.**

This bridge carries an unpaved section-line road over Shell Creek approximately 10.9 miles northeast of Albion. Built ca. 1912 by the Western Bridge and Construction Company of Omaha using standard components rolled by the Carnegie Steel Company in Pittsburgh, it is one of several small-scale pony trusses erected for the county during the 1910s.

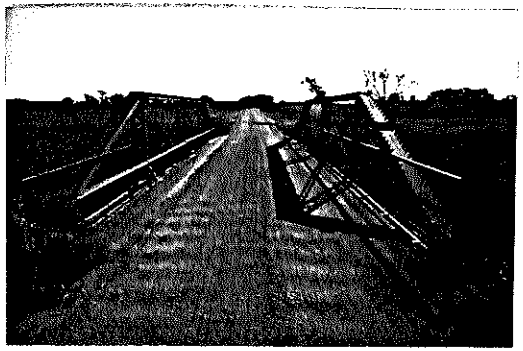
The Shell Creek Bridge typifies bridge construction in Boone County - and Nebraska, generally - in the 1910s. With its modest dimensions and standardized configuration and detailing, it is a representative example of the state's most common truss type, built by one of Nebraska's most prolific bridge erectors.

NAME(S) OF STRUCTURE
Shell Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C000612020; Boone County Commissioners' Record, refer to the following entries in Book 4: 14 January 1913 (page 340), 5 January 1914 (page 379), 2 February 1914 (page 386), 2 September 1914 (page 411), 1 December 1914 (page 425), 4 May 1915 (page 449), 16 August 1915 (page 469), 5 October 1915 (page 474), December 1915 (page 487), 1 March 1916 (page 498), located at Boone County Courthouse, Albion Nebraska; field inspection by Clayton Fraser, 28 September 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Beaver Creek Bridge
NDOR: C000613930

BOON06

DATE(S) OF CONSTRUCTION
ca.1917

LOCATION
county road over Beaver Creek; S5/6, T19N, R5W
1.6 miles north of Boone; Boone County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge /roadway bridge

RATING NRHP non-eligible (score: 34)

CONDITION
fair

OWNER
Boone County

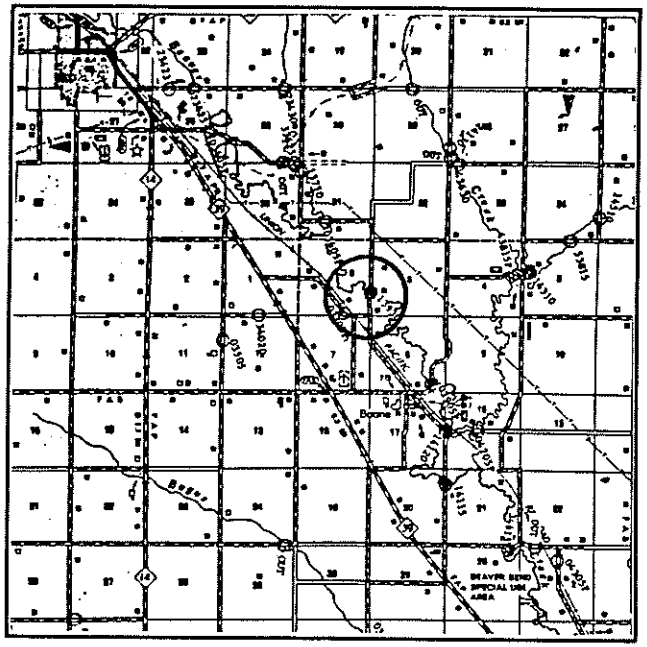
span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt pony truss
span length:	60.0'	substructure:	concrete abutments with concrete / timber wingwalls
total length:	60.0'	floor/decking:	gravel on timber decking with steel I-beam stringers
roadway wdt.:	15.7'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 looped rectangular eyebars; lateral bracing: round bar with threaded ends; floor beam: I-beam bolted to vertical; guardrail: 2 angles; endpost-mounted builder's plate: **Built by the Western Bridge & Construction Co., Omaha Neb.**

Located a mile-and-a-half north of the small town of Boone, this pin-connected pony truss carries an unpaved county road over Beaver Creek in southeast Boone County. A builder's plate on the truss's endpost identifies the contractor as the Western Bridge and Construction Company of Omaha (Boone County's exclusive steel bridge contractor through the 1910s and 1920s). Although contemporary county records fail to list specific bridges in their discussion of bridge work, they do indicate extensive bridge construction activity between 1915 and 1920, virtually all of it with Western Bridge. During the early 1910s, Boone County typically built 14-foot-wide trusses on pile bent abutments; the 16-foot roadway width and concrete substructure of this truss suggests a relatively late construction date, however, probably ca. 1917. Essentially unaltered, the truss is made up of standard components rolled by the Cambria steel mills in Pittsburgh, and it displays standard configuration and detailing.

The Beaver Creek Bridge typifies short-span truss construction in Nebraska in the 1910s. Fabricated from a state standard design and built by one of the state's most prolific bridge erectors during a time of intense bridge activity, it fits well within the mainstream of technological trends for the period. Lacking any major historical significance in its present location and typifying an exceedingly common structural type in Nebraska, this bridge lacks an appreciable level of significance.

NAME(S) OF STRUCTURE
Beaver Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C000613930; Boone County Commissioners' Record, refer to the following entries in Book 5: 1 March 1917 (page 11), 2 October 1917 (page 43), 1 November 1917 (page 49), 5 February 1918 (page 66), 2 July 1918 (page 86), 1 October 1918 (page 98), 1 April 1919 (page 127), located at Boone County Courthouse, Albion, Nebraska; field inspection by Clayton Fraser, 28 September 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Beaver Creek Bridge
NDOR: C000614115

BOON07

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
county road over Beaver Creek; S20/21, T19N, R5W
1.2 miles southeast of Boone; Boone County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING non-eligible (score: 32)

CONDITION
fair

OWNER
Boone County

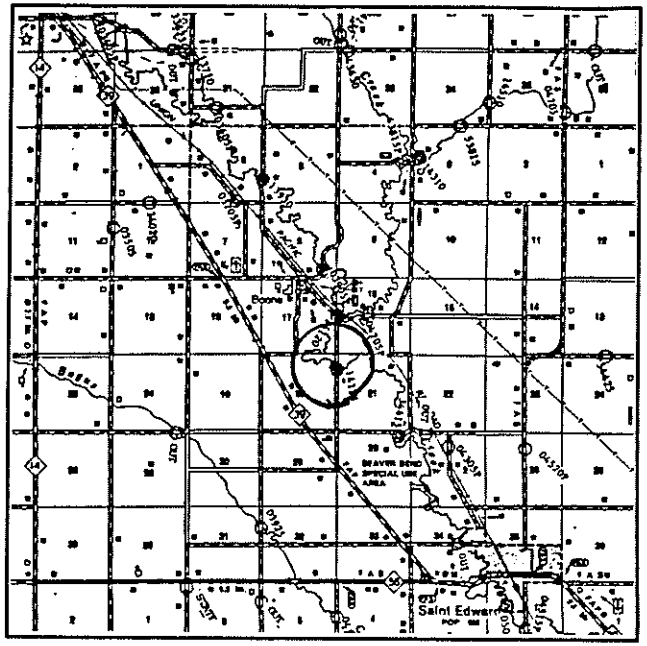
span number:	1	superstructure:	steel, 5-panel, pin-connected Pratt pony truss
span length:	70.0'	substructure:	steel pile bent abutments with timber wingwalls
total length:	70.0'	floor/decking:	timber decking over steel stringers
roadway wdt.:	15.8'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 punched rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 punched rectangular eyebars; lateral bracing: round bar with threaded ends; floor beam: I-beam, field bolted to vertical; guardrail: 2 angles; guardrail: 2 angles

This single-span pony truss carries an unpaved county road across Beaver Creek, 1.2 miles southeast of the small town of Boone. The configuration, detailing and 16-foot roadway width of the truss, with its steel pile-bent substructure, indicate an erection date around 1915. From the time it began building steel bridges in 1908 throughout the mid-1920s, Boone County contracted exclusively with the Western Bridge and Construction Company of Omaha, one of Nebraska's most prolific bridge erectors. This structure displays the earmarks of a Western Bridge standard truss, fabricated using components rolled by the Cambria steel mills in Pittsburgh; it remains essentially unaltered.

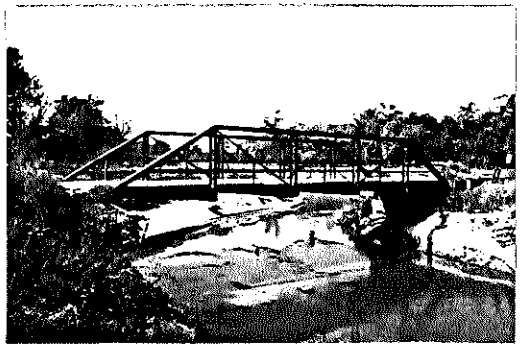
Built during a period of extensive bridge construction activity in Boone County, the Beaver Creek Bridge is a typical example of Nebraska's most common truss type.

NAME(S) OF STRUCTURE
Beaver Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C000614115; Boone County Commissioners' Record, refer to the following entries in Book 4: 14 January 1913 (page 340), 5 January 1914 (page 379), 2 February 1914 (page 386), 2 September 1914 (page 411), 1 December 1914 (page 425), 4 May 1915 (page 449), 16 August 1915 (page 469), 5 October 1915 (page 474), December 1915 (page 487), 1 March 1916 (page 498), located at Boone County Courthouse, Albion, Nebraska; field inspection by Clayton Fraser, 28 September 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Beaver Creek Bridge
NDOR: C000614120

BOON08

DATE(S) OF CONSTRUCTION
ca.1925

LOCATION
county road over Beaver Creek; S16/17, T19N, R5W
0.7 mile southeast of Boone; Boone County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 32)

CONDITION
good

OWNER
Boone County

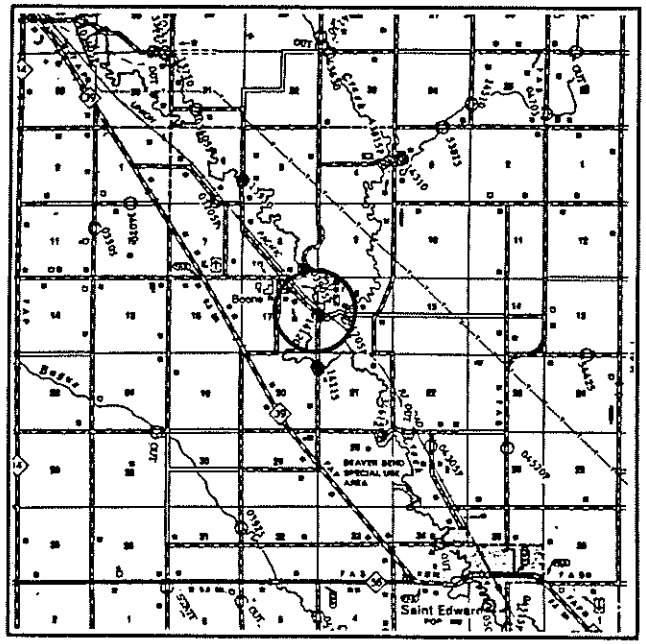
span number:	1	superstructure:	steel, 5-panel, rigid-connected Pratt pony truss
span length:	100.0'	substructure:	concrete abutments and wingwalls
total length:	100.0'	floor/decking:	timber decking over steel stringers
roadway wdt.:	15.9'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 channels with batten plates; vertical: 4 angles with batten plates; diagonal: 2 angles with batten plates; lateral bracing: 1 angle; floor beam: I-beam, field bolted to vertical; guardrail: 2 angles

With its single 100-foot span, this five-panel, rigid-connected, structure is among the longest pony trusses in Nebraska. It is situated over Beaver Creek, less than a mile southeast of the small town of Boone, in southeast Boone County. Although county records of the period are vague in their references to specific bridges, physical evidence and general bridge building trends in Boone County suggest that this structure was erected ca. 1925 by the Western Bridge and Construction Company from standardized plans produced by the Nebraska Highway Department. Structurally unaltered, the Beaver Creek Bridge retains a high degree of physical integrity.

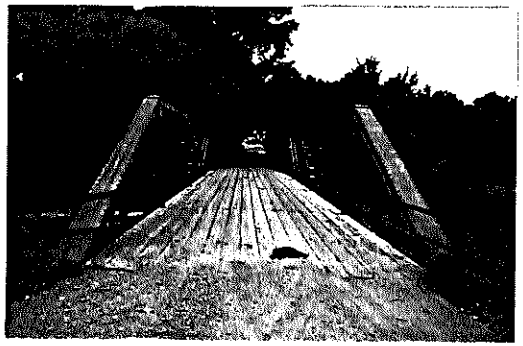
During the mid-1920s, numerous long-span, rigid-connected Pratt pony trusses were fabricated in Nebraska from standard designs promulgated by the state highway department. The Beaver Creek Bridge is Boone County's sole remaining example of this relatively common structural type, but is otherwise undistinguished among Nebraska's more recent trusses.

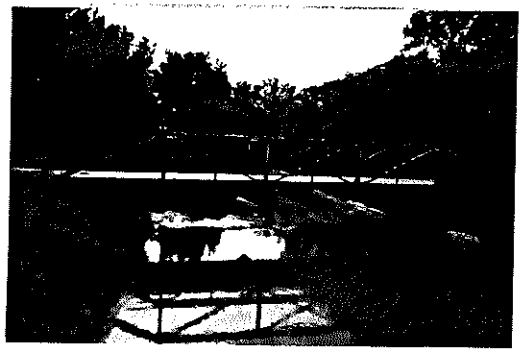
NAME(S) OF STRUCTURE
Beaver Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C000614120; Boone County Commissioners' Record, Book 5, located at Boone County Courthouse, Albion, Nebraska; field inspection by Clayton Fraser, 28 September 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Shell Creek Bridge
NDOR: C000614720

BOON09

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
county road over Shell Creek; S13/14, T21N, R5W
10.5 miles northeast of Albion; Boone County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 34)

CONDITION
fair

OWNER
Boone County

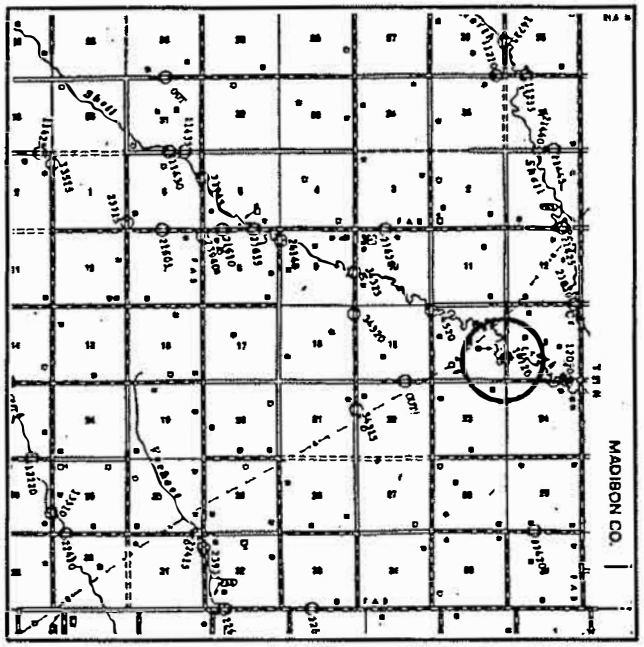
span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt pony truss
span length:	70.0'	substructure:	steel pile bent abutments with timber wingwalls
total length:	70.0'	floor/decking:	timber decking over steel stringers
roadway wdt.:	15.6'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 looped rectangular eyebars; lateral bracing: round bar with threaded ends; floor beam: I-beam, field bolted to vertical; guardrail: 2 angles; endpost-mounted builder's plate: Built by the Western Bridge & Construction Co., Omaha Neb.

Consisting of a single 70-foot span, this small-scale pony truss carries a section-line road across Shell Creek approximately 10.5 miles northeast of Albion, the county seat. Contemporary county records are vague regarding references to specific bridges, but physical evidence and general bridge building trends in Boone County suggest that this structure was erected ca.1915 by the Western Bridge and Construction Company of Omaha, using steel components rolled by the Carnegie Steel Company of Pittsburgh. The bridge has been altered little since its original construction, and it retains a high degree of physical integrity.

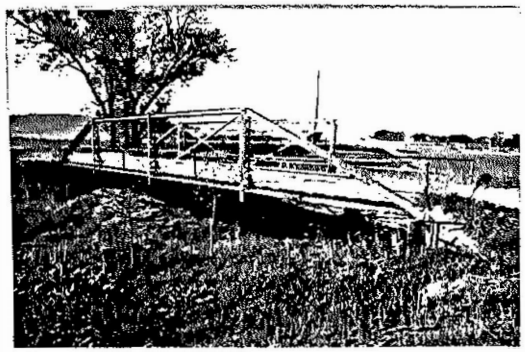
Marketed extensively by virtually all of the in-state bridge contractors and promoted in the form of standardized designs by the Nebraska State Engineer's office, the pinned Pratt pony truss was used widely by Nebraska's counties to carry roads over the state's myriad small streams. The Western Bridge and Construction Company of Omaha was one of Nebraska's two largest purveyors of steel spans (the Standard Bridge Company formed its chief competition). Western alone erected thousands of such short-span trusses throughout the state in the first two decades of the 20th century. The Shell Creek Bridge typifies this construction trend. A 70-foot Pratt truss erected ca.1915, it fits well within the milieu of Nebraska roadway bridge construction.

NAME(S) OF STRUCTURE
Shell Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C000614720; Boone County Commissioners' Record, refer to the following entries in Book 4: 14 January 1913 (page 340), 5 January 1914 (page 379), 2 February 1914 (page 386), 2 September 1914 (page 411), 1 December 1914 (page 425), 4 May 1915 (page 449), 16 August 1915 (page 469), 5 October 1915 (page 474), December 1915 (page 487), 1 March 1916 (page 498), located at Boone County Courthouse, Albion, Nebraska; field inspection by Clayton Fraser, 28 September 1989.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Plum Creek Bridge
NDOR: C000625420

BOON10

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
county road over Plum Creek; S10/15, T18N, R6W
7.8 miles southeast of Cedar Rapids; Boone County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 31)

CONDITION
fair

OWNER
Boone County

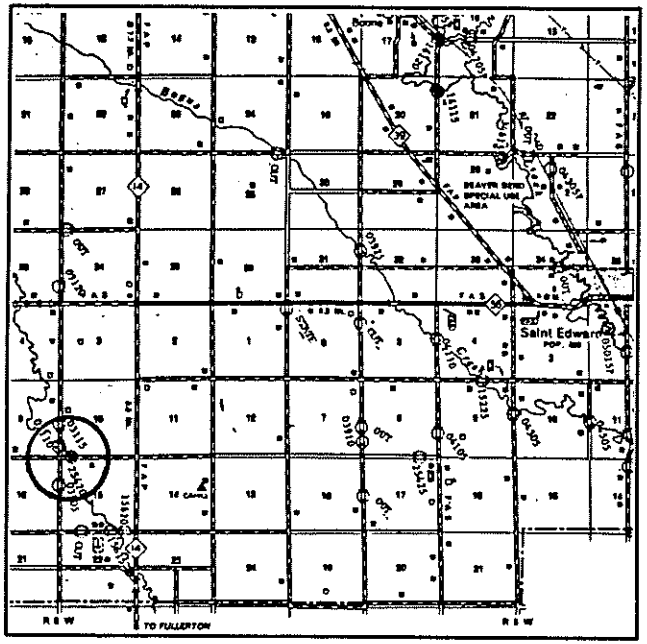
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt pony truss
span length:	50.0'	substructure:	steel pile bent abutments with timber wingwalls
total length:	71.0'	floor/decking:	timber decking over steel stringers
roadway wdt.:	15.6'	other features:	upper chord: 2 channels with cover and batten plates; lower chords: 2 looped rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 round eyebars; lateral bracing: round bar with threaded ends; floor beam: I-beam, field bolted to vertical; guardrail: 2 angles; endpost-mounted builder's plate: **Built by the Western Bridge & Construction Co., Omaha Neb.**

This single-span pony truss carries an unpaved county road across Beaver Creek, 7.8 miles southeast of Cedar Rapids. The configuration, detailing and 16-foot roadway width of the truss, with its steel pile-bent substructure, indicate an erection date around 1915. From the time it began building steel bridges in 1908 throughout the mid-1920s, Boone County contracted exclusively with the Western Bridge and Construction Company of Omaha, one of Nebraska's most prolific bridge erectors. This structure displays the earmarks of a Western Bridge standard truss, fabricated using components rolled by the Carnegie Steel Company in Pittsburgh; it remains essentially unaltered.

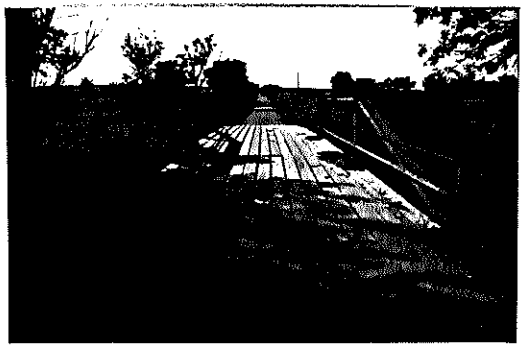
Built during a period of extensive bridge construction activity in Boone County, the Beaver Creek Bridge is a typical example of Nebraska's most common truss type.

NAME(S) OF STRUCTURE
Plum Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C000625420; Boone County Commissioners' Record, refer to the following entries in Book 4: 14 January 1913 (page 340), 5 January 1914 (page 379), 2 February 1914 (page 386), 2 September 1914 (page 411), 1 December 1914 (page 425), 4 May 1915 (page 449), 16 August 1915 (page 469), 5 October 1915 (page 474), December 1915 (page 487), 1 March 1916 (page 498), located at Boone County Courthouse, Albion, Nebraska; field inspection by Clayton Fraser, 28 September 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Smith Bridge [Keya Paha River Bridge] BOYD01
NDOR: C000800710

DATE(S) OF CONSTRUCTION
1924

LOCATION
county road over Keya Paha River; S22, T34N, R16W
6.5 miles southwest of Naper; Boyd County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 34)

CONDITION
fair

OWNER
Boyd County

span number:	1	superstructure:	steel, 8-panel, pin-connected Pratt through truss with steel stringer approach spans
span length:	140.0'	substructure:	steel pile bent abutments with timber wingwalls
total length:	182.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	16.0'	other features:	upper chord: 2 channels with cover plates and lacing; lower chord: 2 looped rectangular eyebars; vertical: 2 channels with lacing; diagonal: 2 looped rectangular eyebars; 1 round eyebar with turnbuckle; lateral bracing: round bar with threaded ends; strut: 2 angles, braced; floor beam: I-beam field bolted to vertical; guardrail: 2 channels

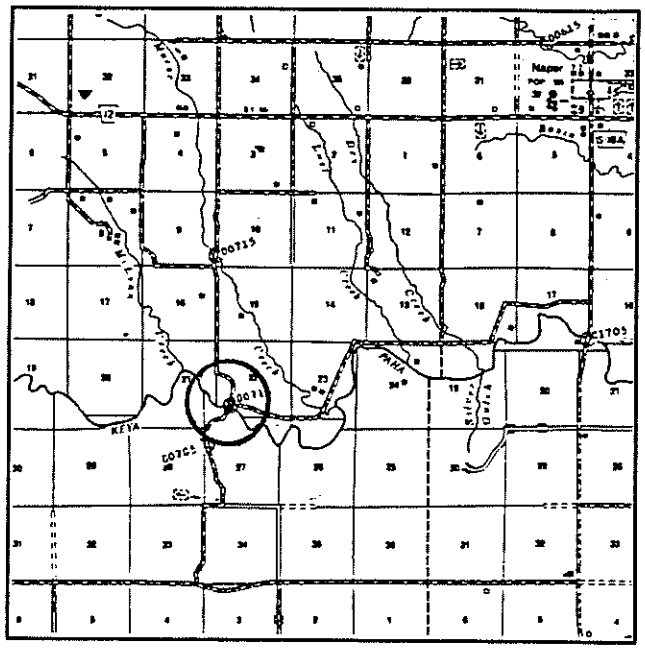
On April 7, 1908, the Boyd County Commissioners awarded a contract to the Townsend Bridge Company of O'Neill, Nebraska, to build all of the county's wagon bridges with spans greater than 70 feet - the county's first such annual bridge contract. The next day the commissioners instructed Townsend to build a steel truss over the Keya Paha River at the R.B. Smith crossing southwest of the small town of Naper. Completed by early September, the structure consisted of a single 140-foot through truss, supported by steel cylinder piers. In July 1924 the county commissioners solicited proposals from bridge companies for a 140-foot replacement span with concrete abutments at the Smith crossing. Bids were received in August and rejected as too high. The county substituted steel piling for concrete in the substructure to reduce costs, relet the bidding, and in September contracted with the Standard Bridge Company of Omaha to erect the new Smith Bridge for $3167. The structure was completed later that year. Located in a sparsely settled part of Nebraska's Sand Hills region, the Smith Bridge has carried intermittent traffic since, with only minor maintenance-related modifications.

Boyd County had almost continuous problems with washouts of its multiple-span river bridges and single-span creek bridges, and all but a few of the early 1900s trusses were replaced in the 1920s. Erected in 1924 at the site of an earlier span, the Smith Bridge falls within the mainstream of this trend. The truss is a straightforward example of a common structural type used in Nebraska: the pin-connected Pratt through truss. Although the majority of the state's through trusses have been demolished in subsequent years, the Smith Bridge is not one of the more distinguished survivors.

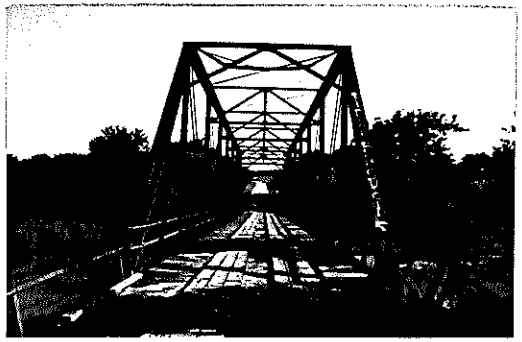
NAME(S) OF STRUCTURE

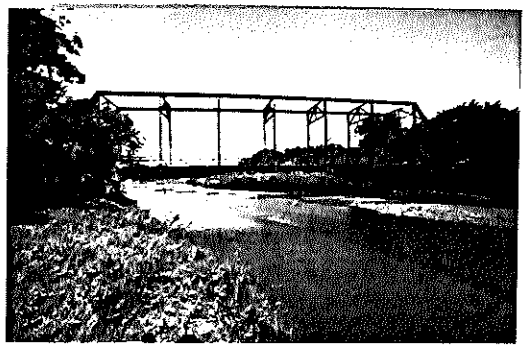
Smith Bridge [Keya Paha River Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C000800710; Boyd County Commissioners' Record, Book 2: 7 April 1908 (page 252), 8 April 1908 (page 254), 9 September 1908 (page 278), 12 October 1908 (page 279); Book 3: 16 July 1924 (page 293), 19 August 1924 (page 293), 21 August 1924 (page 295), 16 September 1924 (page 298), located at Boyd County Courthouse, Butte, Nebraska; field inspection by Clayton Fraser, 7 August 1990.

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Yocum Bridge [Keya Paha River Bridge] BOYD02
NDOR: C000801605

DATE(S) OF CONSTRUCTION
1928

LOCATION
county road over Keya Paha River; S29/30, T34N, R14W
8.0 miles west of Butte; Boyd County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 44)

CONDITION
fair

OWNER
Boyd County

span number:	1	superstructure:	steel, 8-panel, pin-connected Pratt through truss
span length:	150.0'	substructure:	steel pile bent abutments with timber wingwalls
total length:	152.0'	floor/decking:	timber hollywood deck with asphalt cover over timber stringers
roadway wdt.:	16.0'	other features:	upper chord: 2 channels with cover plates and lacing; lower chord: 2 looped rectangular eyebars; vertical: 2 channels with lacings; diagonal: 2 looped rectangular eyebars; counter: 1 round eyebar with turnbuckle; lateral bracing: round bar with threaded ends; strut: 2 angles braced; floor beam: I-beam field bolted; guardrail: 2 channels

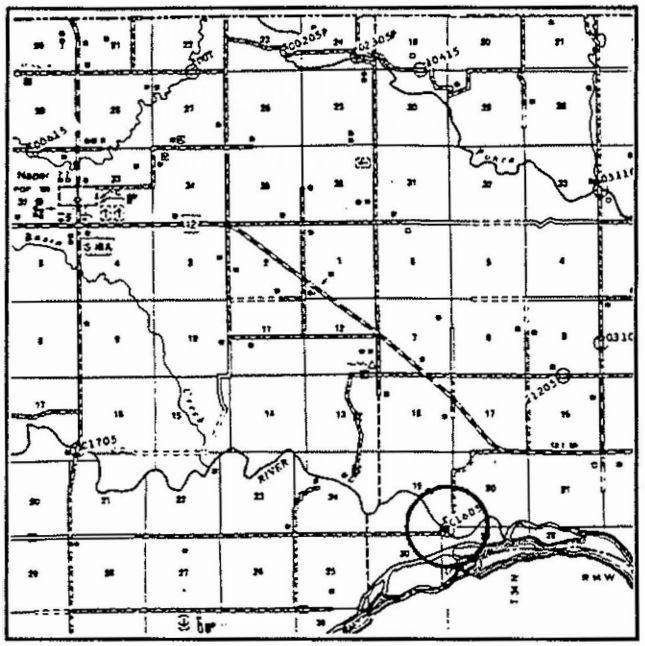
Early in 1904 the Boyd County Commissioners contracted with E. Roy Townsend of O'Neill, Nebraska, for seven steel trusses, including a 152-foot span over the Keya Paha River at Yokum's Crossing, near the river's mouth between Butte and Naper. Completed later that year, the Yokum Bridge carried light traffic for some 24 years before the county moved to replace it in 1928 with a new truss. After soliciting proposals in March for this bridge and three pony trusses, the county commissioners rejected all bids the following month and formed a committee to confer with the state engineer regarding strategy. In May the county awarded a contract (cost: $6150) to the Standard Bridge Company of Omaha for a 150-foot truss to replace the existing bridge. A Standard crew worked on the new Yokum Bridge throughout 1928, completing the structure by year's end; the following year it was purchased by the state highway department as a state aid bridge. The Yokum Bridge has carried relatively light traffic since, in essentially unaltered condition.

Built in 1928, the Yokum Bridge is among the most recent of Nebraska's pin-connected through trusses. Its late construction date makes the bridge an anachronism, built more than a decade after the adoption of rigid-connected technology by the state highway department. The structure is otherwise undistinguished: a typical example of a mainstay structural type, the Pratt through truss.

NAME(S) OF STRUCTURE

Yocum Bridge [Keya Paha River Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C000801605; Boyd County Commissioners' Record, Book 2: 14 January 1904 (page 22), 29 March 1904 (pages 32, 33), 4 May 1904 (page 37), 26 July 1904 (page 52); Book 3: 23 March 1926 (page 331), 21 March 1928 (page 381), 24 April 1928 (page 384), 25 April 1928 (page 384), 16 May 1928 (page 387), 14 August 1928 (page 402), 16 October 1928 (page 409), 19 December 1928 (page 413), located at Boyd County Courthouse, Butte, Nebraska; Aivars G. Ronis, **Nebraska State Aid Bridges, 1911-1936**, Nebraska Department of Roads, July 1971; **Eighteenth Biennial Report of the Department of Public Works**, Lincoln, Nebraska, 1929-1930; field inspection by Clayton Fraser, 7 August 1990.

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Ponca Creek Bridge
NDOR: C000802305P

BOYD03

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
county road over Ponca Creek; S24, T35N, R15W
4.2 miles northeast of Naper; Boyd County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 17)

CONDITION
fair

OWNER
Boyd County

span number: 1
span length: 40.0'
total length: 84.0'
roadway wdt.: 15.8'

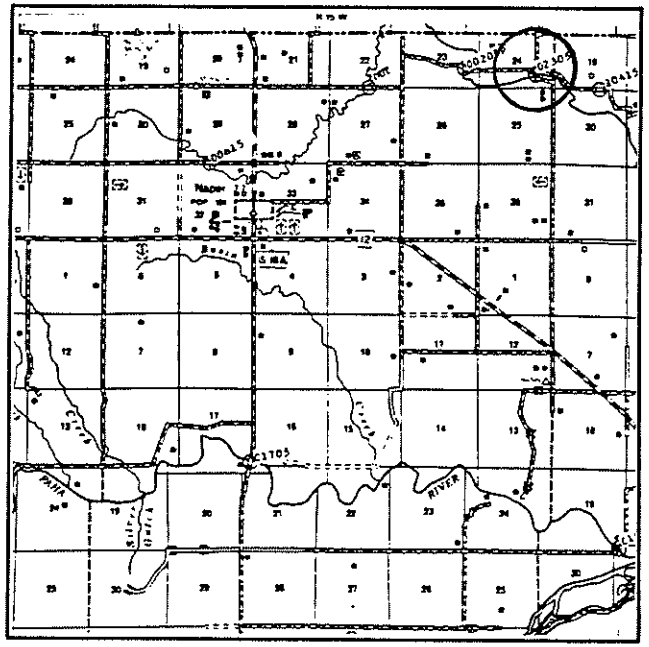
superstructure: steel, 3-panel, pin-connected Pratt pony truss with steel stringer and girder approach spans
substructure: timber and steel pile abutments with timber wingwalls; steel pile bent piers
floor/decking: timber deck over steel stringers
other features: upper chord: 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars; vertical: 4 angles with lacing; diagonal: 1 round eyebar with threaded ends; lateral bracing: round bar with threaded ends: floor beam: I-beam field bolted to vertical; guardrail: 2 angles; endpost-mounted builder's plate: **BUILT BY THE WESTERN BRIDGE & CONSTRUCTION Co. OMAHA NEB**

This modestly scaled pony truss carries a gravel-surfaced road over Ponca Creek northeast of the small town of Naper, near the South Dakota state line. A builder's plate on the truss itself identifies its contractor as the Western Bridge and Construction Company of Omaha, but its construction history cannot be traced through contemporary county records. The piecemeal appearance of the approach spans suggests that either the truss was moved here from an earlier location or that the approaches have been altered significantly.

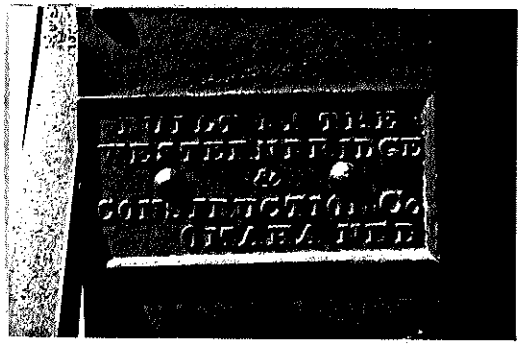
A typical - and largely undocumentable - example of Nebraska's most common roadway bridge configuration, the Ponca Creek Bridge displays both marginal significance and structural integrity.

NAME(S) OF STRUCTURE
Ponca Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C000802305P; field inspection by Clayton Fraser, 7 August 1990.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Sedivy Bridge [Lynch Bridge; Cemetery Bridge; Ponca Creek Bridge] BOYD04
NDOR: C000808105

DATE(S) OF CONSTRUCTION
1908; moved 1922

LOCATION
county road over Ponca Creek; S22/23, T33N, R10W
south edge of Lynch; Boyd County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 25)

CONDITION
fair

OWNER
Boyd County

span number:	1	superstructure:	steel, 5-panel, pin-connected Pratt through truss
span length:	80.0'	substructure:	steel pile bent abutments with timber back and wingwalls
total length:	101.0'	floor/decking:	timber hollywood deck over steel stringers
roadway wdt.:	13.7'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 looped rectangular eyebars; vertical: 1 square eyebar with two-pronged forged lower eye at hip, 2 channels with lacing; diagonal: 2 looped rectangular eyebars, 1 round eyebar with turnbuckle; lateral bracing: round bar with threaded ends; strut: 2 angles; floor beam: I-beam U-bolted to vertical; guardrail: 2 angles

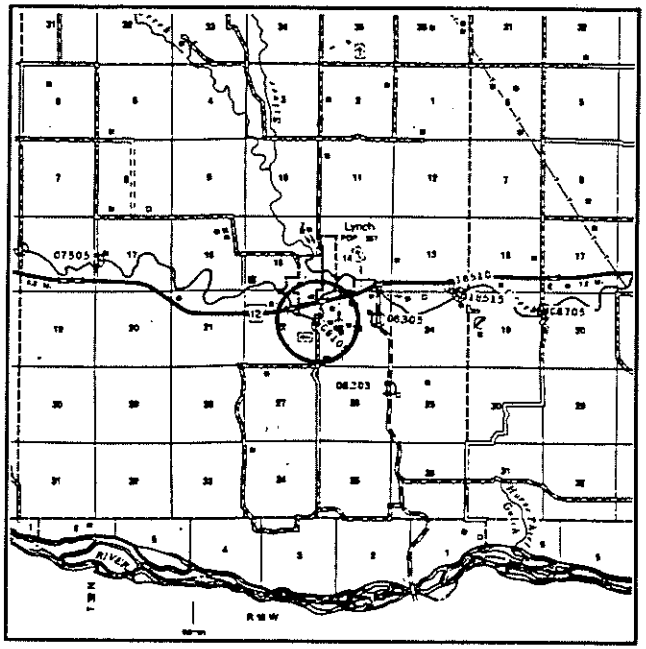
On April 7, 1908, the Boyd County Commissioners awarded contracts to the Townsend Bridge Company of O'Neill NE to build all of the county's wagon bridges with spans greater than 70 feet, and to William Wilkerson for bridges less than 70 feet - the county's first such annual bridge contracts. The next day the commissioners instructed Wilkerson to build a bridge over Ponca Creek at the Sedivy Crossing near the small town of Lynch. Before Wilkerson could commence work the following month, the commissioners instead awarded the contract to build the bridge to Townsend, who erected the small-scale through truss later that year using steel components rolled by Cambria (the truss's fabricator is unknown). Located on the main road that linked Lynch with Spencer and Butte, the county's two other major towns, the Sedivy Bridge carried much of the county's east-west traffic. The route was later designated Nebraska State Highway 12 and the Sedivy Bridge replaced with a wider structure in 1922. At the request of several residents of Lynch, the truss was moved that year by the county to its present location over Ponca Creek at the southern periphery of Lynch and placed on a new steel pile bent substructure. Here it carries intermittent traffic, largely between Lynch and the cemetery immediately south of town. Although moved, the Sedivy truss itself retains a high degree of structural integrity.

The Sedivy Bridge typifies pin-connected truss technology of the early 1900s, but with its modest dimensions and standard configuration, it does not represent any technological superlatives. The bridge was once important to transportation and settlement in Boyd County in its original location, but it plays only a marginal role today.

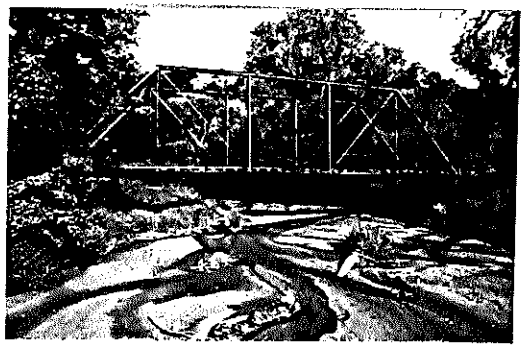
NAME(S) OF STRUCTURE

Sedivy Bridge [Lynch Bridge; Cemetery Bridge; Ponca Creek Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C000808105; Boyd County Commissioners' Record, Book 2: 7 April 1908 (page 252), 8 April 1908 (page 254), 4 May 1908 (page 255); Book 3: 28 March 1922 (page 236), located at Boyd County Courthouse, Butte, Nebraska; field inspection by Clayton Fraser, 7 August 1990.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Ponca Creek Bridge
NDOR: C000808705

BOYD05

DATE(S) OF CONSTRUCTION
1904

LOCATION
county road over Ponca Creek; S19/20, T33N, R9W
3.0 miles east of Lynch; Boyd County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 43)

CONDITION
fair

OWNER
Boyd County

span number: 1
span length: 48.0'
total length: 79.0'
roadway wdt.: 14.3'

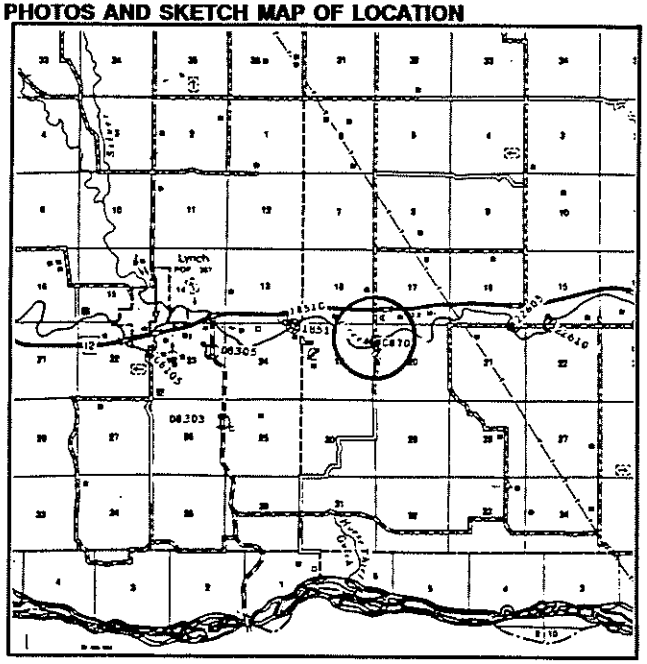
superstructure: steel, 3-panel, pin-connected Pratt half-hip pony truss with timber stringer approach span
substructure: steel/timber pile bent abutments and pier with timber wingwalls
floor/decking: timber deck over timber stringers
other features: upper chord: 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 looped rectangular eyebars, 1 round eyebar with turnbuckle; lateral bracing: round bar with threaded ends; floor beam: I-beam U-bolted to vertical; guardrail: timber (removed); gusset plate at hip connection

On October 17, 1903, the Boyd County Commissioners convened a special session to consider a petition for a bond election for bridge construction in Lynch Precinct. The bond issue passed, and early the next year the county solicited proposals for four 48-foot pony trusses over Ponca Creek, with two other bridges elsewhere in the county. The commissioners rejected all bids in March, re-advertised to the bridge companies in April, and awarded a construction contract the following month to E. Roy Townsend of O'Neill, Nebraska. This small-scale pony truss east of Lynch was among the seven steel spans erected by Townsend under the contract that year. It carried wagon and auto traffic on the county's main east-west road until the re-routing of State Highway 12, and today carries only intermittent local traffic. At some point, the bridge's substructure has been largely replaced, but the truss itself retains a high degree of structural integrity.

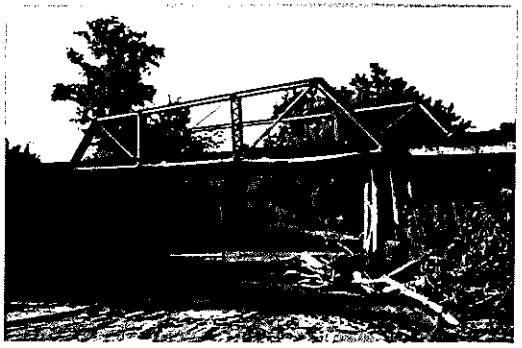
Flowing west-east across nearly the entire width of Boyd County, Ponca Creek formed the most troublesome barrier to inter-county traffic. (The Niobrara River, which forms the county's southern boundary created a more formidable barrier, but it was bridged in only a handful of places, and in each of these crossings, the county received assistance, either from neighboring Holt County or from the Nebraska Highway Department.) As a result, most of the county's bridge budget - beginning with the 1903 bond issue - historically has been directed toward erecting and maintaining Ponca Creek spans. Only one of the earliest Ponca Creek bridges in the county remains in its original location: this 48-foot pony truss. The remainder have been either moved or replaced. As the oldest vehicular bridge in the county, and the most significant extant Ponca Creek span, this bridge enjoys a degree of historical significance. Although modest in its dimensions and detailing, the Ponca Creek enjoys some technological significance as one of the older documentable trusses in the state.

NAME(S) OF STRUCTURE
Ponca Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C000808705; Boyd County Commissioners' Record, Book 2: 17 October 1903 (pages 1-4), 14 January 1904 (page 22), 23 February 1904 (page 24), 29 March 1904 (pages 32-33), 4 May 1904 (page 37), 7 July 1904 (page 47), 25 July 1904 (page 50), 26 July 1904 (page 52), located at Boyd County Courthouse, Butte, Nebraska; field inspection by Clayton Fraser, 7 August 1990.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Ponca Street Bridge [Lynch Bridge; Ponca Creek Bridge] BOYD06
NDOR: U1485F2405

DATE(S) OF CONSTRUCTION
1912-13; moved 1928

LOCATION
Ponca Street over Ponca Creek; S14, T33N, R10W
Lynch; Boyd County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 27)

CONDITION
fair

OWNER
Town of Lynch

span number:	1	superstructure:	steel, 5-panel, pin-connected Pratt through truss with steel stringer approach span
span length:	80.0'	substructure:	steel pile bent abutments with timber wingwalls
total length:	99.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	15.5'	other features:	upper chord: 2 channels with cover plates and lacing; lower chord: 2 looped rectangular eyebars; vertical: 2 channels with lacing; diagonal: 2 looped rectangular eyebars, 2 round eyebars with turnbuckles; lateral bracing: round bar with threaded ends; strut: 2 angles; floor beam: I-beam, field bolted to vertical; guardrail: 2 angles; endpost-mounted builder's plate: BUILT BY THE WESTERN BRIDGE & . . . . [broken]

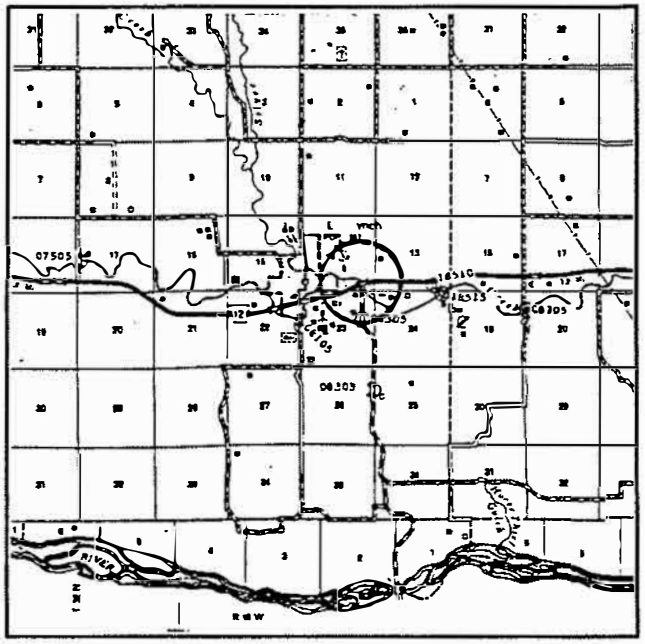
The Boyd County Commissioners in October 1912 ordered the county clerk to advertise for competitive bids for one 80-foot through truss and five 40- to 60-foot pony trusses, all to carry county roads across Ponca Creek. After reviewing the proposals the following month, the commissioners awarded a construction contract for all six spans to the Western Bridge and Construction Company. The Omaha-based firm commenced work soon thereafter and the following year completed the bridges, including this pinned Pratt through truss just west of the small town of Lynch. Located on the principal east-west artery across Boyd County, the structure carried much of the county's traffic until its replacement in 1928 by another span. At that time the Village of Lynch dismantled the truss and re-erected it at its present location over Ponca Creek. The Ponca Street Bridge has carried town traffic since, in essentially unaltered condition.

Flowing west-east across nearly the entire width of Boyd County, Ponca Creek formed the most troublesome barrier to inter-county traffic. Boyd County consumed the bulk of its bridge-building budget contracting for numerous Ponca Creek bridges. These early trusses were rarely well-constructed, however, and as a result all but a few were replaced or moved by the 1920s. Built over Ponca Creek in 1912 and subsequently moved, the Ponca Street Bridge in Lynch falls within this bridge building milieu. This short-span truss is undistinguished, both technologically and historically, and as such enjoys only marginal significance.

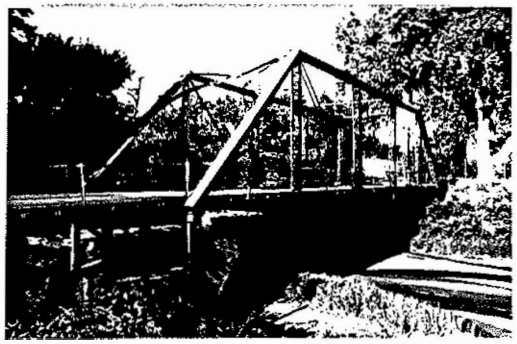
NAME(S) OF STRUCTURE

Ponca Street Bridge [Lynch Bridge; Ponca Creek Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number U1485F2405; Boyd County Commissioners' Record, Book 3: 22 October 1922 (page 36), 25 November 1912 (page 37), 14 February 1928 (page 379), located at Boyd County Courthouse, Butte, Nebraska; field inspection by Clayton Fraser, 7 August 1990.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Norden Bridge [Niobrara River Bridge] BROW01
NDOR: C000901705P

DATE(S) OF CONSTRUCTION
1916; moved 1963

LOCATION
county road over the Niobrara River; S33, T33N, R23W
15.4 miles north of Johnstown; Brown / Keya Paha County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 40)

CONDITION
good

OWNER
Brown / Keya Paha Counties

span number: 1
span length: 175.0'
total length: 178.0'
roadway wdt.: 16.3'

superstructure: steel, 10-panel, pin-connected Parker through truss
substructure: steel pile bent abutments with concrete caps
floor/decking: timber decking over steel stringers
other features: upper chord: 2 channels with cover plate and lacing; lower chord: 2 punched rectangular eyebars; vertical: 2 channels with lacing; diagonal: 2 punched rectangular eyebars; lateral bracing: round bar with threaded ends; strut: 4 angles with lacing, braced; floor beam: I-beam field bolted to vertical below lower chord; guardrail: 2 gaspipes

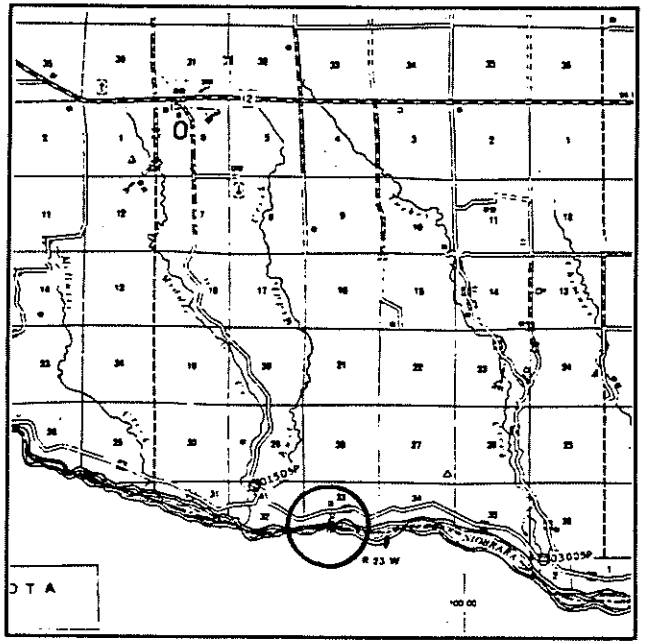
Early in 1910 the boards of Colfax and Butler counties acted to replace the main channel section of the existing timber pile wagon bridge across the Platte River south of Schuyler. In May they adopted plans drawn up by the state engineer's office for six 175-foot steel spans. The counties immediately advertised for competitive bids, and a month later received proposals from nine bridge contractors. The construction contract went to the Elkhorn Construction Company, and the Fremont-based contractor began work on the structure soon thereafter. As completed in 1911, the Schuyler Bridge consisted of the six new pinned Parker through trusses, approached on the north by a 325-foot timber trestle and on the south by a 1055-foot trestle. In 1916 the structure was designated a state aid bridge, and the state engineer's office removed the timber trestle approaches and replaced them with four new 175-foot through trusses, built in 1916-17 by the Elkhart Bridge and Iron Company of Elkhart Indiana (cost: $32,000 for the new spans; $17,000 to replace the existing bridge). The Schuyler State Aid Bridge carried regional traffic until its replacement in the early 1960s. In December 1962 Brown and Keya Paha Counties acquired one of the original 175-foot trusses (probably one of the 1916 spans, but this is not clear) to span the Niobrara River south of Norden, at the site of a 1911 truss that was extensively damaged by flooding. The span was dismantled, moved, and re-erected by the Diamond Engineering Company in 1963 for slightly less money than the entire 1916 bridge. Sited beautifully over some natural rapids on the river, the Norden Bridge has carried light traffic since in the sparsely settled Sand Hills region, in unaltered condition.

During the formative years of the state aid bridge program, the Nebraska state engineer designed several long-span through trusses. Among these were the Parshall State Aid Bridge, the Redbird State Aid Bridge, the Fremont State Aid Bridge, the Genoa State Aid Bridge, the Gross State Aid Bridge and the Schuyler State Aid Bridge. This structure is one of four spans salvaged from Schuyler (the others: STAN02, STAN07, ROCK01). It has lost the considerable historical significance accrued by the original Schuyler State Aid Bridge. But the Norden Bridge retains its technological significance as a well-preserved early example of state-designed pin-connected truss construction.

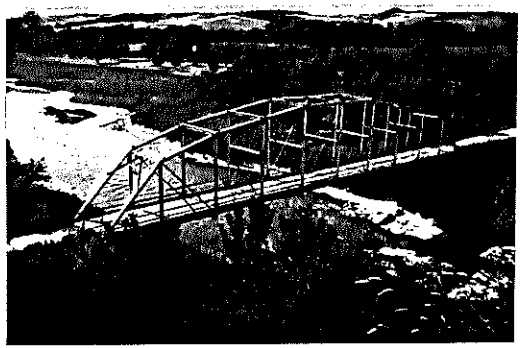
NAME(S) OF STRUCTURE

Norden Bridge [Niobrara River Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C000901705P; Colfax County Commissioners' Record, Book 5: 10 May 1910 (pages 539-40), 27 June 1910 (page 545), located at Colfax County Courthouse, Schuyler, Nebraska; Keya Paha Commissioners' Record, Book 1: 28 March 1900 (pages 444-45), 4 June 1901 (page 517); Book 2: 1 July 1903 (page 10), 22 August 1906 (page 123), 23 July 1908 (page 216), 2 February 1909 (page 241), 20 April 1908 (page 285), 18 May 1908 (page 291), 5 April 1911 (page 322), 30 August 1911 (page 349), 8 March 1912 (page 361)20 December 1912 (page 385) 8 January 1913 (page 387); Book 4: 12 June 1962 (page 644), 18 June 1962 (page 646), 19 November 1962 (page 661), 24 December 1962 (page 663), located at Keya Paha County Courthouse, Springview, Nebraska; Aivars G. Ronis, "Nebraska State Aid Bridges," typewritten report by Nebraska Department of Roads, 1971, revised September 1978, n.p.; Nebraska State Board of Irrigation, Highways and Drainage, **Eleventh Biennial Report**, 1915-16, pages 185, 190-91; field inspection by Clayton Fraser, 7 August 1990.

INVENTORIED BY	**AFFILIATION**	**DATE**
Clayton B. Fraser	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Meadville Bridge [Niobrara River Bridge] BROW02
NDOR: C000913725

DATE(S) OF CONSTRUCTION
1907-08

LOCATION
county road over the Niobrara River; S13, T32N, R22W
14.5 miles north of Ainsworth; Brown / Keya Paha Counties, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 41)

CONDITION
good

OWNER
Brown / Keya Paha Counties

span number:	2	superstructure:	steel, 6-panel, pin-connected Pratt through truss with steel stringer approach spans
span length:	96.0'	substructure:	steel pile bent abutments with sheet piling and timber wingwalls; steel pile bent pier
total length:	246.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	16.0'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 looped rectangular eyebars; vertical: 1 round eyebar at hip, 2 channels with lacing elsewhere; diagonal: 2 looped rectangular eyebars; counter: 1 round eyebar with turnbuckle; lateral bracing: round bar with threaded ends; strut: 2 angles with continuous plate; floor beam: I-beam, U-bolted to lower chord pin at vertical; guardrail: 1 channel (new)

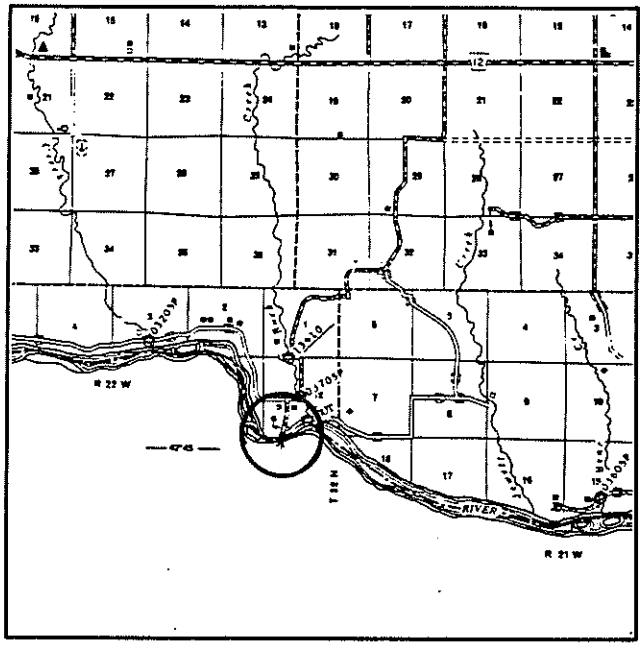
- In the years prior to 1907, the existing iron trusses at the Meadville crossing required increasing repairs to keep the structure serviceable. Finally, at a joint meeting held July 27, 1907, on the bridge itself, the Brown and Keya Paha County Commissioners voted unanimously to replace the old structure entirely, under emergency law. Two weeks later the counties contracted with the Townsend Bridge Company of O'Neill NE (apparently without competitive bidding) to erect two 96-foot spans with approaches for $6500. Using its own design, Townsend agreed to build the structure within 90 days. He overshot the schedule slightly, but on February 17, 1908, the two boards met at the newly completed Meadville Bridge and declared it completed. Later that spring, the old bridge was dismantled and its material divided between the two counties. Enterprising local resident Claude Huddle appeared before the commissioners and offered to haul Keya Paha County's share of the old material to Springville for .15 per 100 pounds. The counties repaired the Meadville Bridge periodically during the 1910s and 1920s, including repairs by the Western Bridge Company in August of 1919 after the bridge was deemed in dangerous condition. In 1923 the structure was designated a state aid bridge, and continued to carry traffic with minimal alterations until January 1948. Then, in an unprecedented project made necessary by bank erosion, Nebraska's Bureau of Roads and Bridges moved the two spans, intact, some 30 feet upstream, placing them on a new steel pile substructure. The Meadville Bridge has since carried vehicular traffic across the Niobrara River in Nebraska's sparsely-settled Sand Hills region.

The pinned Pratt through truss was the structure of choice for medium-span applications in Nebraska in the early 1900s. Numerous such trusses were erected across the state during that period from standard plans held by the state engineer's office and virtually every in-state bridge contractor. Several Pratt through truss remain in use today, although almost all are single-span examples. Though altered by the replacement of its original substructure and portals, the Meadville Bridge is technologically significant as an excellent early example of this mainstay structural type. It is historically significant as a regionally important crossing of the Niobrara River, located miles in either direction from the next crossings.

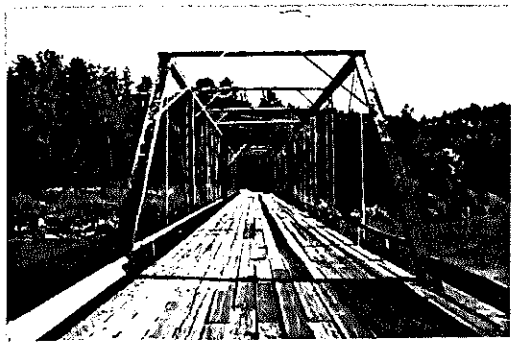
NAME(S) OF STRUCTURE

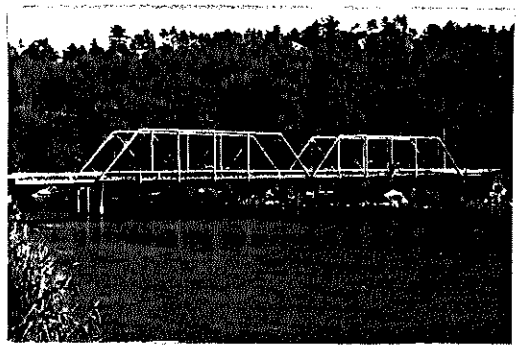
Meadville Bridge [Niobrara River Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C000913725; Keya Paha County Commissioners' Record, Book 1: 19 April 1901 (page 511); Book 2: 8 February 1906 (page 101), 5 October 1906 (page 128), 27 July 1907 (page 164), 10 August 1907 (page 169), 14 November 1907 (page 179), 29 November 1907 (page 181), 17 February 1908 (page 193), 2 April 1908 (page 200), 18 June 1908 (page 208), 11 July 1908 (page 212), 5 March 1910 (page 280), 26 August 1910 (page 309), 8 March 1916 (page 488); Book 3: 8 August 1919 (page 30), 21 August 1919 (page 32), 22 June 1920 (page 40), 8 January 1923 (page 97), 6 June 1923 (page 106); Aivars G. Ronis, "Nebraska State Aid Bridges: 1911-1936," typewritten report by Nebraska Department of Roads, 1971, revised September 1978, n.p.; Jack M. Crook, "Moving A Bridge Intact," **Nebraska Blue Print**, May 1948, pp. 204-218; field inspection by Clayton Fraser, 7 August 1990.

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Stanley Bridge [Wood River Bridge] BUFF01
NDOR: C001002115

DATE(S) OF CONSTRUCTION
1914

LOCATION
county road over Wood River; S26/27, T10N, R17W
3.0 miles southeast of Amherst; Buffalo County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 33)

CONDITION
good

OWNER
Buffalo County

span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt pony truss
span length:	50.0'	substructure:	steel pile bent abutments and timber wingwalls
total length:	51.0'	floor/decking:	earth over corrugated steel decking with steel stringers
roadway wdt.:	15.6'	other features:	upper chord: 2 channels with cover plates and lacing; lower chord: 2 punched rectangular eyebars; vertical: 4 angles with batten plates; diagonal: 2 rectangular punched eyebars; lateral bracing: round bar; floor beam: I-beam, field bolted to vertical; guardrail: 2 channels

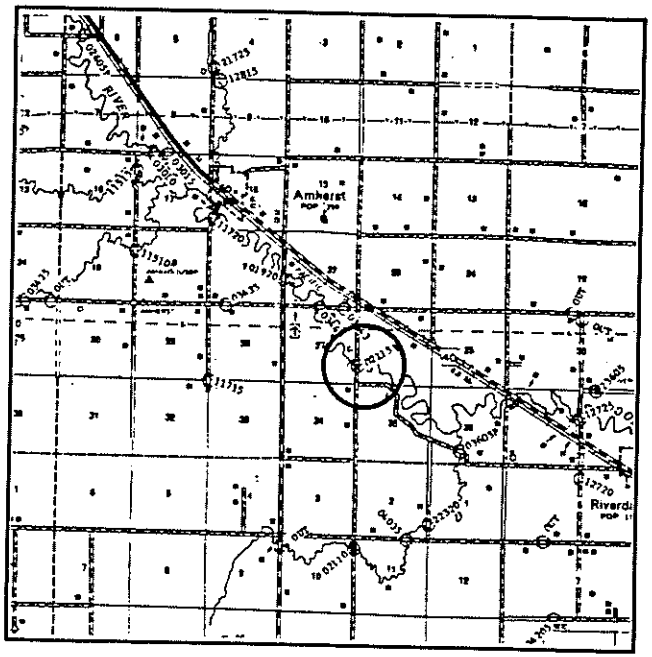
After heavy spring flooding in 1914, the Buffalo County Board of Supervisors acted in July to replace fourteen county road bridges damaged or destroyed by high waters. Perhaps the most dramatic of these failures was the bridge over the Wood River on the main road between Kearney and Amherst, the superstructure of which lay askew in the riverbed beneath the wrecked abutments. For this crossing south of the old town of Stanley the county purchased a new 50-foot pony truss from the Omaha Structural Steel Works, which held the county's annual bridge construction contract for 1914. Omaha Steel completed the Stanley Bridge by December, using components rolled by the Cambria mills in Pittsburgh. It no longer carries mainline traffic but otherwise functions as designed. The replacement of the structures's original timber deck with corrugated steel constitutes its only alteration of note.

Although it retains a high degree of physical integrity, the Stanley Bridge is a typical example of a relatively common vehicular truss type.

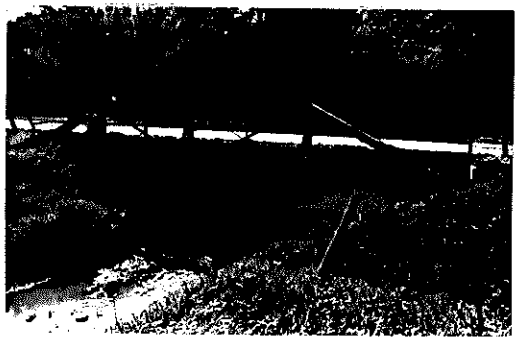
NAME(S) OF STRUCTURE

Stanley Bridge [Wood River Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001002115; Buffalo County Supervisors' Record, Book 8: 25 February 1914 (page 106), 25 March 1914 (page 113), 15 July 1914 (page 140), 26 August 1914 (page 145), 21 December 1914 (page 177), located at Buffalo County Courthouse, Kearney, Nebraska; field inspection by Clayton Fraser and Paula Sutton, 6 September 1989.

INVENTORIED BY

Clayton B. Fraser and Paula E.M. Sutton

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge BUFF02
NDOR: C001002905

DATE(S) OF CONSTRUCTION
1902

LOCATION
county road over North Channel Platte River; S5/6, T8N, R16W
4.4 miles west of Kearney; Buffalo County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 40)

CONDITION
fair

OWNER
Buffalo county

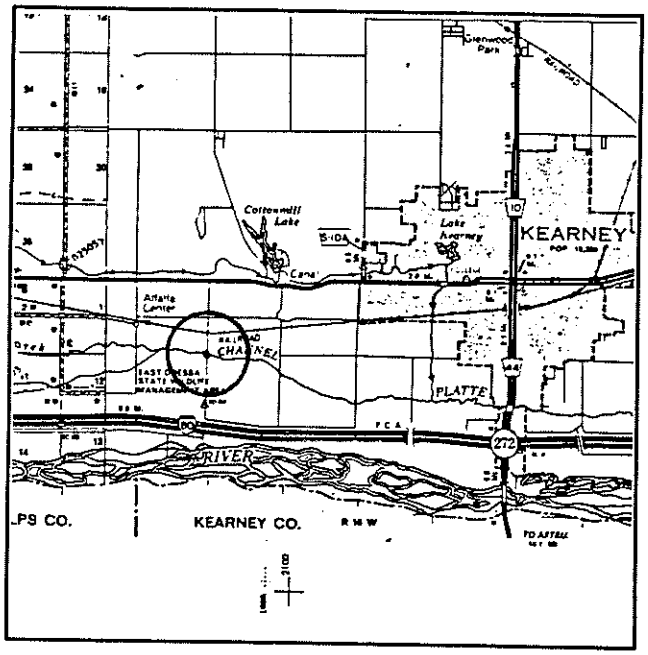
span number:	1	superstructure:	steel, 2-panel, pin-connected Pratt half-hip pony truss
span length:	33.0'	substructure:	timber pile bent abutments and wingwalls
total length:	34.0'	floor/decking:	timber decking over timber stringers
roadway wdt.:	19.9'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 punched square eyebars; vertical: 4 angles with batten plates; diagonal: 2 looped square eyebars; floor beam: I-beam U-bolted to vertical; guardrail: 1 channel

Before 1902 Buffalo County contracted individually for the bridges on its roads. That year, for the first time, the board of supervisors awarded the annual contract for bridge construction, based upon competitive unit-price bids submitted by bridge contractors. The board in March contracted with the Standard Bridge Company of Omaha. One of the seven small-scale structures purchased in September 1902 by the county was this pinned pony truss over Sweet Creek between Garfield and Schneider Townships. Completed later that year using steel components rolled by the Cambria mills in Pittsburgh, the truss was later moved to its present location over the North Channel of the Platte River, south of the cotton mill in Collins Township. It now carries light traffic on this secondary county road. Although moved to its present location, this diminutive pony truss retains an otherwise high degree of physical integrity.

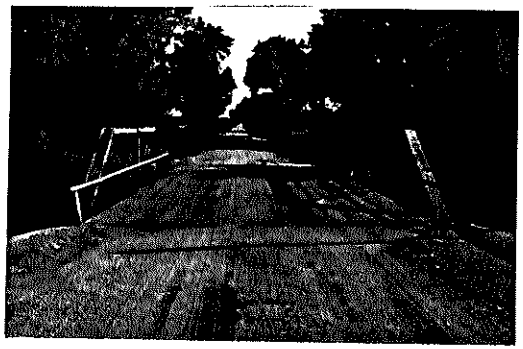
A subtype of the venerable Pratt pony truss, the Pratt half-hip configuration was marketed extensively by Midwestern bridge companies in the early 1900s. Its primary advantage as a structural type was that, by eliminating the vertical members at the hip connections, it was more materially conservant than the standard Pratt. Its disadvantage was that it was generally limited to short-span applications: typically 30-60 feet. But Nebraska's myriad small streams lent themselves to exactly this range. As a result, thousands of pinned half-hip pony trusses were erected across the state between 1900 and 1915, and many remain today. This small structure is significant as one of the oldest examples of its relatively common truss configuration documented by the statewide bridge inventory.

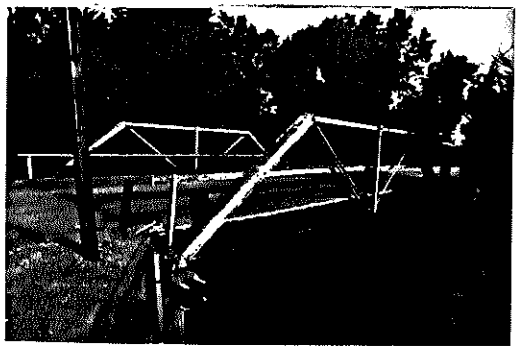
NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001002905; Buffalo County Supervisors' Record, Book 5: 25 March 1902 (page 492), 4 August 1902 (page 533), 10 September 1902 (pages 536-37), located at Buffalo County Courthouse, Kearney, Nebraska; field inspection by Clayton Fraser, 11 July 1989.

INVENTORIED BY
Clayton B. Fraser and Paula E.M. Sutton

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Wood River Bridge
NDOR: C001006525

BUFF03

DATE(S) OF CONSTRUCTION
ca.1907

LOCATION
county road over Wood River; S7/8, T9N, R13W
2.1 miles northeast of Gibbon; Buffalo County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING determined NRHP non-eligible (score: 24)

CONDITION
fair

OWNER
Buffalo County

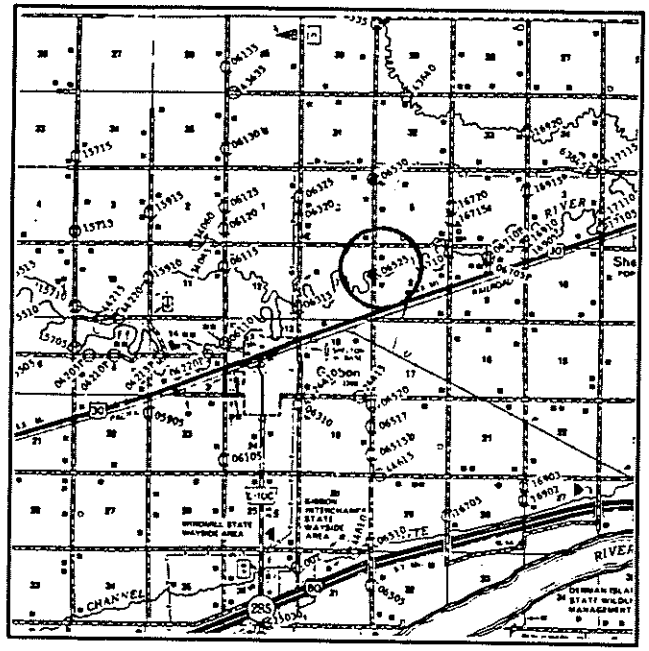
span number:	1	superstructure:	steel, 5-panel, pin-connected Pratt pony truss
span length:	80.0'	substructure:	steel pile bent abutments with timber wingwalls
total length:	80.0'	floor/decking:	timber pile bent decking over timber stringers
roadway wdt.:	20.0'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 punched rectangular eyebars; vertical: 4 angles with batten plates; diagonal: 2 looped rectangular eyebars; floor beam: I-beam U-bolted to vertical; guardrail: 1 channel

Located some two miles northeast of Gibbon, the Wood River Bridge consists of a single 80-foot-span pinned Pratt pony truss. The origins of the bridge are somewhat obscure. By comparing this structure with other, documentable bridges in Buffalo County, it is clear that the truss was fabricated ca.1907 by the Standard Bridge Company of Omaha. Standard held Buffalo County's annual bridge construction contracts from 1902 until 1910. The lack of contemporary government records (in a county that was fairly thorough in recording bridge construction) for a truss at this location suggests that it was moved here at a later date. Standard erected an 80-foot truss at another Wood River crossing in 1906 and three 80-foot spans over the South Loup River in 1907; this may be one of those trusses, moved to its present site. Archival records and physical evidence on the site, however, have proved inconclusive. The bridge has undergone moderate structural alteration, with the addition of steel outriders to the truss's webs.

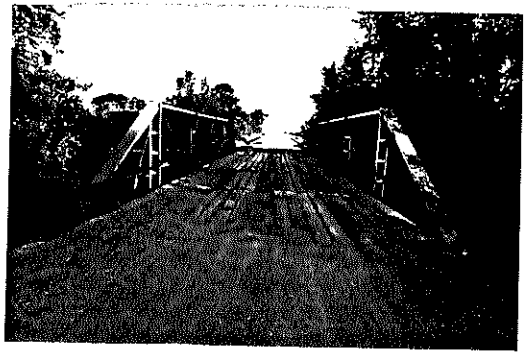
The Wood River Bridge typifies short-span truss construction in Nebraska in the early 1900s. Built by one of the state's major bridge erectors during a period of intense bridge construction activity, it fits well within the mainstream of technological trends for the period. The bridge has suffered alteration in the replacement of its floor system and addition of lateral brace outriders, but is otherwise intact. Lacking any major historical significance in its present location and typifying an exceedingly common structural type in Nebraska, the Wood River Bridge lacks an appreciable level of significance.

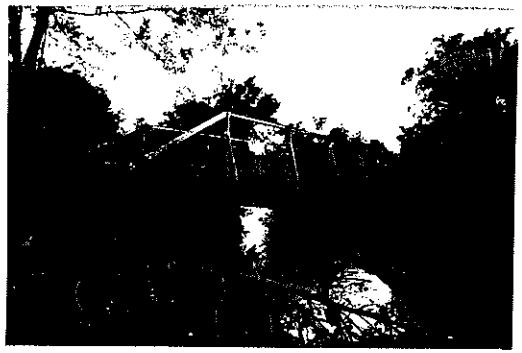
NAME(S) OF STRUCTURE
Wood River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001006525; Buffalo County Supervisors' Records, 1898-1921, located at Buffalo County Courthouse, Kearney, Nebraska; field inspection by Clayton Fraser, 11 July 1989.

INVENTORIED BY
Clayton B. Fraser and Paula E.M. Sutton

AFFILIATION
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Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Brown Bridge
NDOR: C001006530

BUFF04

DATE(S) OF CONSTRUCTION
1916

LOCATION
county road over intermittent stream; S5/6, T9N, R13W
3.0 miles northeast of Gibbon; Buffalo County, Nebraska

USE (ORIGINAL / CURRENT)

RATING NRHP non-eligible (score: 33)

CONDITION
fair

OWNER
Buffalo County

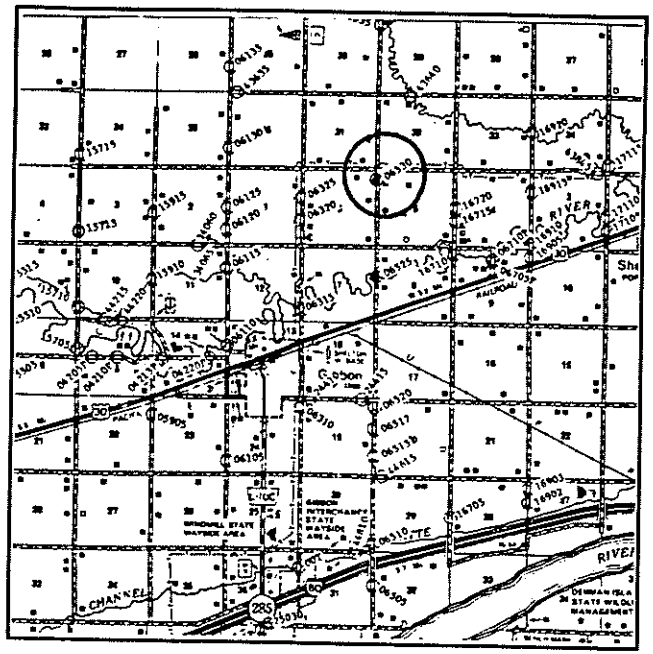
span number:	1	superstructure:	steel stringer
span length:	32.0'	substructure:	steel pile bent abutments with wingwalls
total length:	32.0'	floor/decking:	timber pile hollywood decking
roadway wdt.:	16.2'	other features:	guardrail: 1 channel; stringers: channel exterior, I-beam interior, 9 lines of stringers

The Buffalo County Board of Supervisors in March 1916 awarded its annual bridge construction contract to the Omaha Structural Steel Works, as it had for the preceding three years. Among the 25 small-scale structures built or repaired in the county that year was this steel bridge over an intermittent stream northeast of Gibbon. Consisting of nine lines of steel stringers supported by steel pile bents, the Brown Bridge, as it was initially known, was completed by year's end. It has since carried traffic in essentially unaltered condition.

The Brown Bridge is an undistinguished, small-scale example of a common structural type.

NAME(S) OF STRUCTURE
Brown Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001006530; Buffalo County Supervisors' Record, Book 8: 21 March 1916 (page 301), 14 May 1917 (page 319), located at Buffalo County Courthouse, Kearney, Nebraska; field inspection by Paula Sutton, 6 September 1989.

INVENTORIED BY
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AFFILIATION
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DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Sweet Creek Bridge
NDOR: C001006550

BUFF05

DATE(S) OF CONSTRUCTION
ca.1925

LOCATION
county road over Sweet Creek; S29/30, T12N, R13W
5.7 miles southeast of Ravenna; Buffalo County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 22)

CONDITION
good

OWNER
Buffalo County

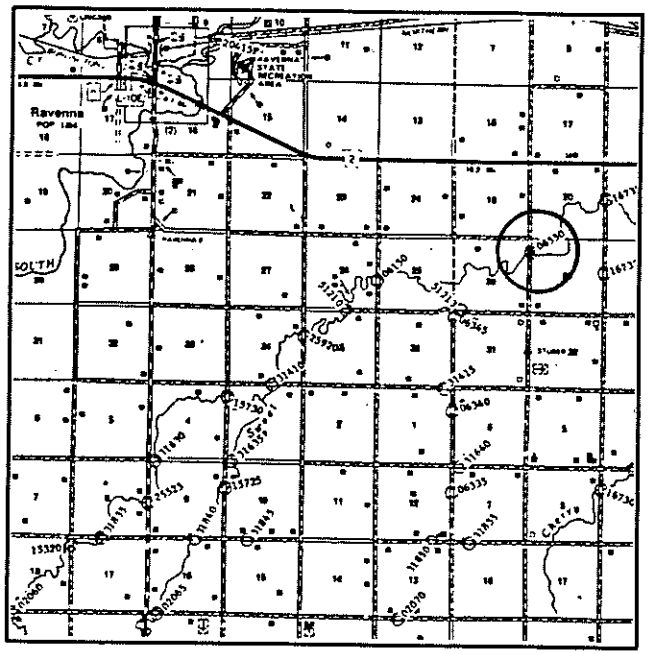
span number:	1	superstructure:	steel, 5-panel, rigid-connected Pratt pony truss
span length:	100.0'	substructure:	steel pile bent abutments with timber wingwalls
total length:	102.0'	floor/decking:	concrete over I-beam stringers
roadway wdt.:	20.2'	other features:	upper chord: 2 channels with cover plates and lacing; lower chord: 2 channels with batten plates; vertical: 4 angles with batten plates; diagonal: 2 angles with batten plates; lateral bracing: round bar; floor beam: I-beam, field bolted to vertical; guardrail: 2 channels

Located southeast of Ravenna in northeastern Buffalo County, the Sweet Creek Bridge consists of a single 100-foot rigid-connected Pratt pony truss, supported by steel pile bent abutments. Comprised of steel components rolled by the Illinois Steel Company, the truss's date and builder are unknown. Based on its design attributes and roadway width, however, the bridge appears to have been built in the mid-1920s from standard plans delineated by the Nebraska Bureau of Roads and Bridges.

The Sweet Creek Bridge is one of three similar 100-foot riveted Pratt ponies surveyed in Buffalo County and is one of dozens of this relatively common structural type found in the state. Virtually all of these can be attributed to the standardized designs developed by the state highway department. Although the 100-foot span length is the longest developed by the highway department for this truss configuration (through trusses were used for longer spans), this fact is only marginally noteworthy. More significant, multi-span examples of this truss type remain in use, unaltered, over the Platte River in western Nebraska. The Sweet Creek Bridge suffers in comparison with these potentially eligible structures. As a historically undocumented, single-span example of a common structural type, carrying a secondary county road over a minor watercourse, the Sweet Creek Bridge enjoys marginal historical and technological significance.

NAME(S) OF STRUCTURE
Sweet Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001006550; field inspection by Clayton Fraser, 11 July 1989.

INVENTORIED BY
Clayton B. Fraser and Paula E.M. Sutton

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Wood River Bridge
NDOR: C001012210

BUFF06

DATE(S) OF CONSTRUCTION
ca.1930

LOCATION
county road over Wood River; S24/25, T11N, R18W
4.0 miles southeast of Miller; Buffalo County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 22)

CONDITION
excellent

OWNER
Buffalo County

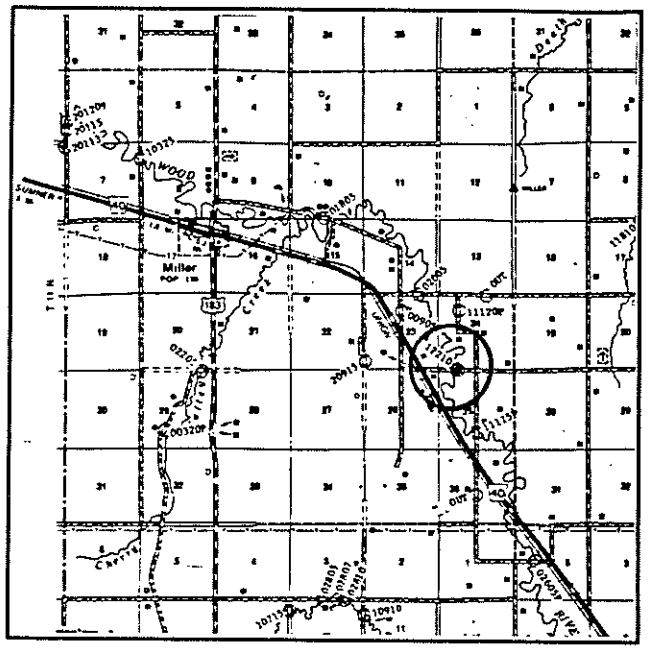
span number:	1	superstructure:	steel, 4-panel, rigid-connected Pratt pony truss with outriders
span length:	100.0'	substructure:	steel pile bent abutments with timber wingwalls
total length:	101.0'	floor/decking:	concrete decking over I-beam stringers
roadway wdt.:	19.6'	other features:	upper chord: 2 channel with cover plates and lacing; lower chord: 4 angles with batten plates; vertical: 4 angles with lacing; diagonal: 4 angles with batten plates; floor beam: I-beam field bolted to vertical; guardrail: 1 channel

Located between Sections 10 and 11 in Township 9 North, Range 17 West, this bridge carries a gravel-surfaced county road across the Wood River in Odessa Township, 4.1 miles southwest of Riverdale. The structure consists of a four-panel, rigid-connected Pratt pony truss with original outriders. The bridge's date of erection is unknown, as there is no builder's plate, and no specific reference to it was found in the Buffalo County Supervisors' Record. But, based on its heavy construction, design, and roadway width, this truss probably dates to circa 1930. Steel for the structure was rolled by the Cambria mills in Pittsburgh, but the name of the builder is also unknown. A notable characteristic is the bridge's one-hundred foot span, among the longest in the state for a Pratt pony truss.

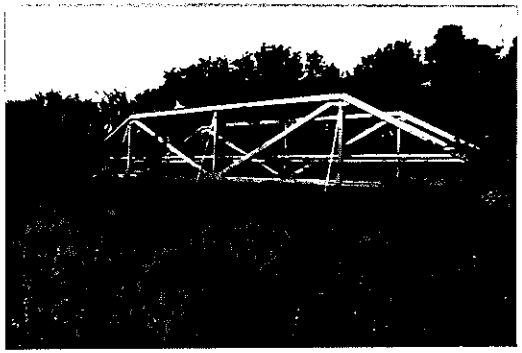
The Wood River Bridge is a typically configured example of a common vehicular truss type, and although it represents the state's longest pony truss design, it is otherwise undistinguished both historically and technologically.

NAME(S) OF STRUCTURE
Wood River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001012210; field inspection by Clayton Fraser, 11 July 1989

INVENTORIED BY
Clayton B. Fraser and Paula E.M. Sutton

AFFILIATION
Fraserdesign, Loveland CO
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DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Sand Creek Bridge
NDOR: C001021625

BUFF07

DATE(S) OF CONSTRUCTION
1910

LOCATION
county road over Sand Creek; S5/8, T11N, R15W
2.9 miles southeast of Pleasanton; Buffalo County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 31)

CONDITION
fair

OWNER
Buffalo County

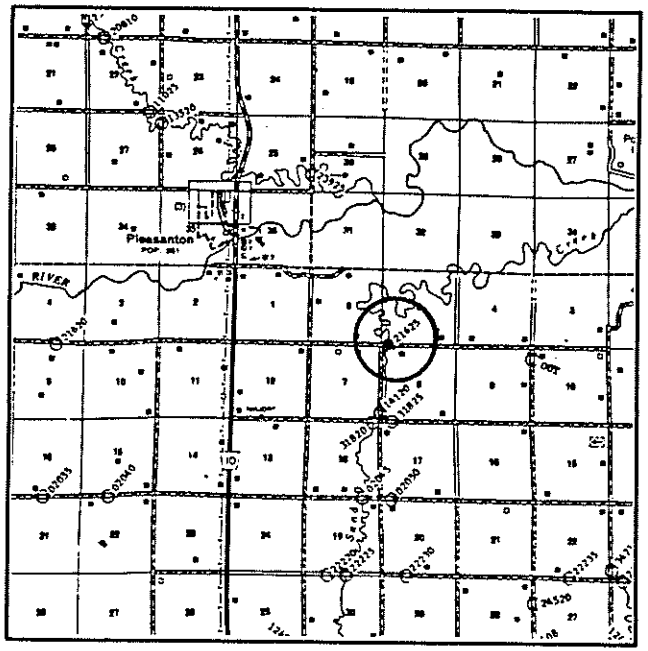
span number:	1	superstructure:	steel stringer
span length:	23.0'	substructure:	steel pile bent abutments and timber wingwalls
total length:	24.0'	floor/decking:	double-layer hollywood decking
roadway wdt.:	20.0'	other features:	guardrail: 1 channel; 10 lines of stringers: 2 exterior channels, 8 interior I-beams

On January 13, 1910, the Buffalo County Board of Supervisors awarded an annual bridge construction contract to the Standard Bridge Company of Omaha, as it had every year since the turn of the century. One of the numerous small-scale bridges ordered by the county that June was this steel structure in Cedar Township. Spanning Sand Creek southeast of Pleasanton, the single-span bridge consisted of ten lines of steel stringers, supported by 18-foot-long steel pile abutments. Using steel beams rolled by Illinois, Standard completed the Sand Creek Bridge later in 1910. It has since carried traffic in essentially unaltered condition.

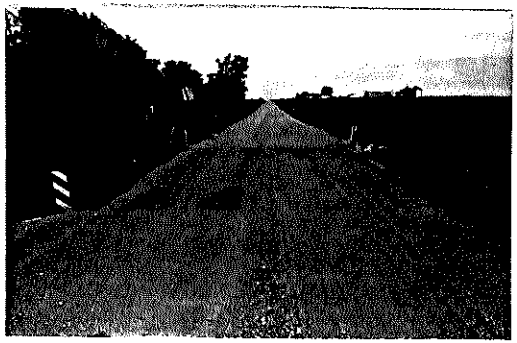
The Sand Creek Bridge is a typical example of an exceedingly common structural type, lacking any historical or technological distinction.

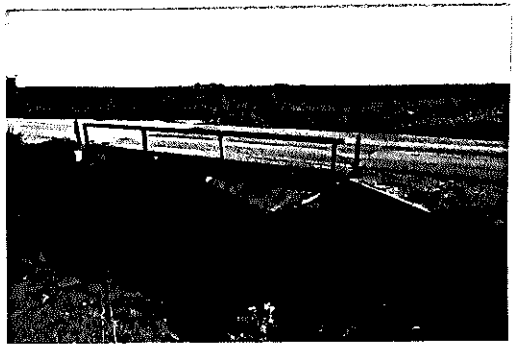
NAME(S) OF STRUCTURE
Sand Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001021625; Buffalo County Supervisors' Record, Book 7: 13 January 1910 (pages 223-24), 4 August 1910 (pages 284-85), 4 January 1911 (page 327), located at Buffalo County Courthouse, Kearney, Nebraska; field inspection by Clayton Fraser and Paula Sutton, 6 September 1989.

INVENTORIED BY
Clayton B. Fraser and Paula E.M. Sutton

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Wood River Bridge
NDOR: C001023115

BUFF08

DATE(S) OF CONSTRUCTION
ca.1907

LOCATION
county road over Wood River; S4/5, T9N, R16W
1.1 miles east of Riverdale; Buffalo County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING determined NRHP non-eligible (score: 24)

CONDITION
fair

OWNER
Buffalo County

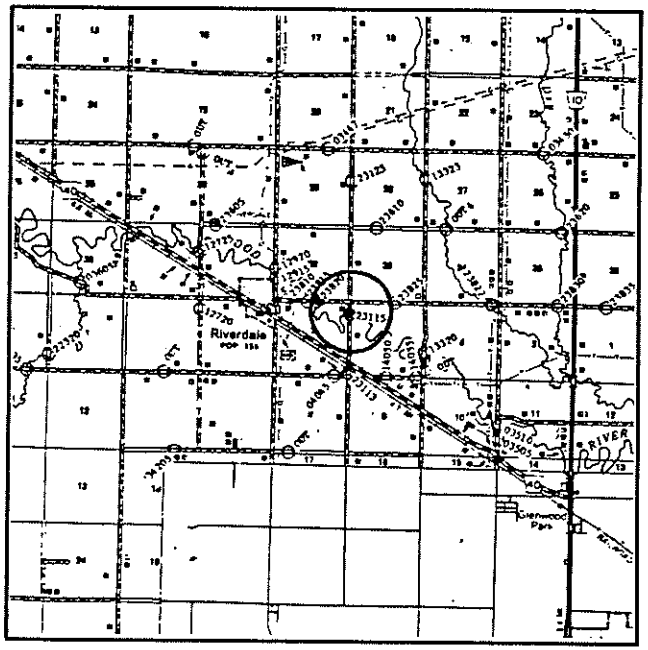
span number:	1	superstructure:	steel, 5-panel, pin-connected Pratt pony truss
span length:	80.0'	substructure:	steel pile bent abutments with timber wingwalls
total length:	81.0'	floor/decking:	timber decking over timber stringers
roadway wdt.:	20.0'	other features:	upper chord: 2 channels with cover and batten plates; bottom chord: 2 punched rectangular eyebars; vertical: 4 angles with batten plates; diagonal: 2 looped rectangular and 2 round eyebars; lateral bracing: round bar; floor beam: I-beam, U-bolted to lower chord pin; guardrail: timber

Located some two miles northeast of Gibbon, the Wood River Bridge consists of a single 80-foot-span pinned Pratt pony truss. The origins of the bridge are somewhat obscure. By comparing this structure with other, documentable bridges in Buffalo County, it is clear that the truss was fabricated ca.1907 by the Standard Bridge Company of Omaha. Standard held Buffalo County's annual bridge construction contracts from 1902 until 1910. The lack of contemporary government records (in a county that was fairly thorough in recording bridge construction) for a truss at this location suggests that it was moved here at a later date. Standard erected an 80-foot truss at another Wood River crossing in 1906 and three 80-foot spans over the South Loup River in 1907; this may be one of those trusses, moved to its present site. Archival records and physical evidence on the site, however, have proved inconclusive. The bridge has undergone moderate structural alteration, with the addition of steel outriders to the truss's webs.

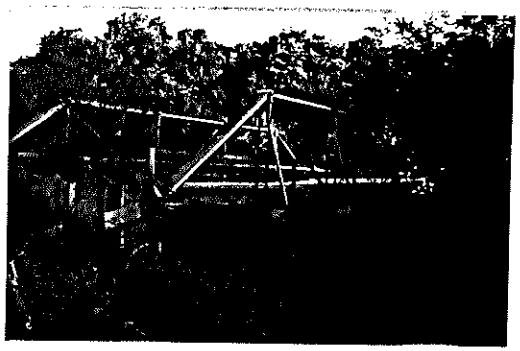
The Wood River Bridge typifies short-span truss construction in Nebraska in the early 1900s. Built by one of the state's major bridge erectors during a period of intense bridge construction activity, it fits well within the mainstream of technological trends for the period. The bridge has suffered alteration in the replacement of its floor system and addition of lateral brace outriders, but is otherwise intact. Lacking any major historical significance in its present location and typifying an exceedingly common structural type in Nebraska, the Wood River Bridge lacks an appreciable level of significance.

NAME(S) OF STRUCTURE
Wood River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001023115; Buffalo County Supervisors' Records 1898-1921, located at Buffalo County Courthouse, Kearney, Nebraska; field inspection by Clayton Fraser, 11 July 1989.

INVENTORIED BY
Clayton B. Fraser and Paula E.M. Sutton

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C001023605

BUFF09

DATE(S) OF CONSTRUCTION
1918

LOCATION
county road over intermittent stream; S30/31, T10N, R16W
1.1 miles northwest of Riverdale; Buffalo County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 38)

CONDITION
fair

OWNER
Buffalo County

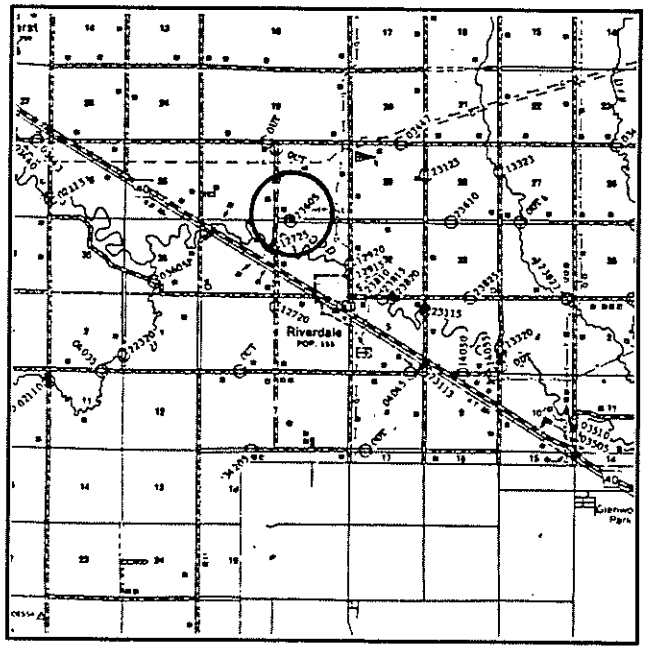
span number:	1	superstructure:	transverse joist deck girder
span length:	36.0'	substructure:	steel pile bent abutments and timber wingwalls
total length:	37.0'	floor/decking:	earth covered timber decking over steel transverse stringers
roadway wdt.:	16.2'	other features:	guardrail: 1 channel

During 1916, 1917 and 1918, the Buffalo County supervisors concentrated their bridge construction efforts on large-scale state aid bridges over the Platte River, largely deferring construction of smaller structures elsewhere in the county. Among the few bridges undertaken by the county in 1918 was this steel span over an intermittent tributary of the Wood River, located in Divide Township northwest of Riverdale. It was erected by the Omaha Structural Steel Works, which held the county's annual bridge construction contract for that year. Consisting of a 36-foot transverse joist deck girder, load-rated at 15 tons, the bridge was completed later that year. It has carried traffic since, in essentially unaltered condition.

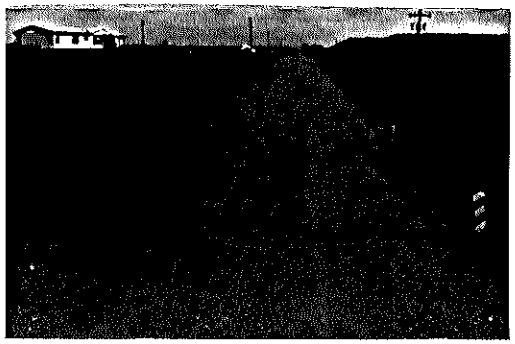
The transverse joist girder configuration was reportedly developed by Robert Zale Drake, proprietor of the Standard Bridge Company of Omaha. The Nebraska state engineer adopted the bridge type as early as 1917 and used it extensively throughout the 1920s for both large and small crossings. Though much smaller and less visually prepossessing than some of the transverse joist girder State Aid Bridges included in the statewide bridge inventory, this structure is technologically significant as the earliest documented example of this indigenous structural type.

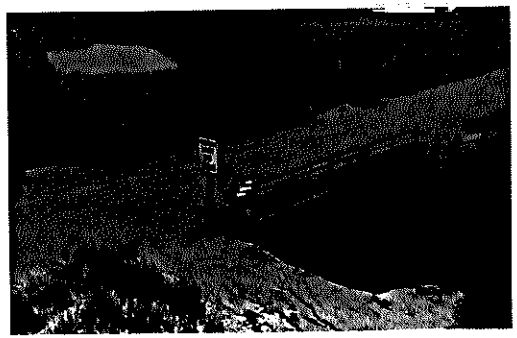
NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001023605; Buffalo County Supervisors' Record, Book 8: 3 March 1918 (page 500), 17 April 1918 (page 511), located in Buffalo County Courthouse, Kearney, Nebraska; Ted Johnson, "A Discussion of the Transverse Joist Girder Bridge," **Nebraska Blue Print**, 26 (March 1927), 12-13; field inspection by Paula Sutton, 6 September 1989.

INVENTORIED BY	**AFFILIATION**	**DATE**
Clayton B. Fraser and Paula E.M. Sutton	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Wood River Bridge
NDOR: C001023820

BUFF10

DATE(S) OF CONSTRUCTION
1915

LOCATION
county road over Wood River; S5, T9N, R16W

0.4 mile east of Riverdale; Buffalo County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 36)

CONDITION
good

OWNER
Buffalo County

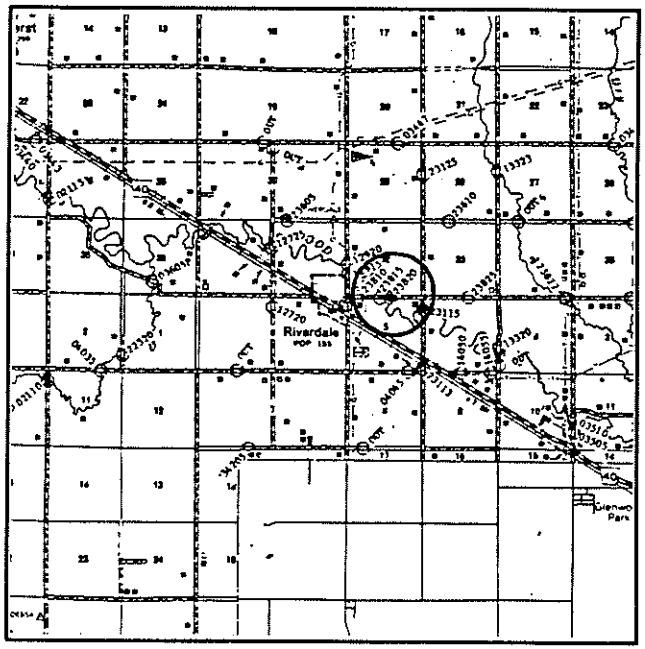
span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt pony truss with outriders
span length:	60.0'	substructure:	steel pile bent abutments with timber wingwalls
total length:	61.0'	floor/decking:	timber decking over steel stringers
roadway wdt.:	16.0'	other features:	upper chords: 2 channels with cover plates and lacing; lower chord: 2 punched rectangular eyebars; vertical: 4 channels with batten plates; diagonal: 2 punched rectangular eyebars; lateral bracing: round bar with threaded ends; floor beam: I-beam, field bolted to vertical; guardrail: 2 channels

In February 1915 the Buffalo County Board of Supervisors adopted bridge plans prepared by the state engineer as the county standards, marking the first time that the county did not use designs by a private bridge company. A month later the county contracted with the Omaha Structural Steel Company for its annual bridge contract. Then, on June 15, 1915, the Board's Bridge Committee placed an order for five steel bridges, including a 60-foot pony truss to be erected over the Wood River just west of Riverdale. By the following January, the Omaha Structural Steel Company had completed work on all five bridges, and submitted requests for payment totaling $31,145.30. From this amount, $2,258.53 was for construction of the Wood River crossing. Since its erection, the Wood River Bridge, a four-panel, pin-connected Pratt pony truss, has carried vehicular traffic in essentially unaltered condition.

The Wood River Bridge is a typically configured example of a common standard-design vehicular truss type.

NAME(S) OF STRUCTURE
Wood River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001023820; Buffalo County Supervisors' Record, Book 8: 24 February 1915 (page 202), 26 March 1915 (page 209), 14 June 1915 (pages 221-22) , 6 January 1916 (page 290), located at Buffalo County Courthouse, Kearney, Nebraska; field inspection by Clayton Fraser and Paula Sutton, 6 September 1989.

INVENTORIED BY
Clayton B. Fraser and Paula E.M. Sutton

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Mud Creek Bridge
NDOR: C001030415

BUFF11

DATE(S) OF CONSTRUCTION
ca.1925

LOCATION
county road over Mud Creek; S1/12, T12N, R15W
3.3 miles northwest of Ravenna; Buffalo County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 20)

CONDITION
good

OWNER
Buffalo County

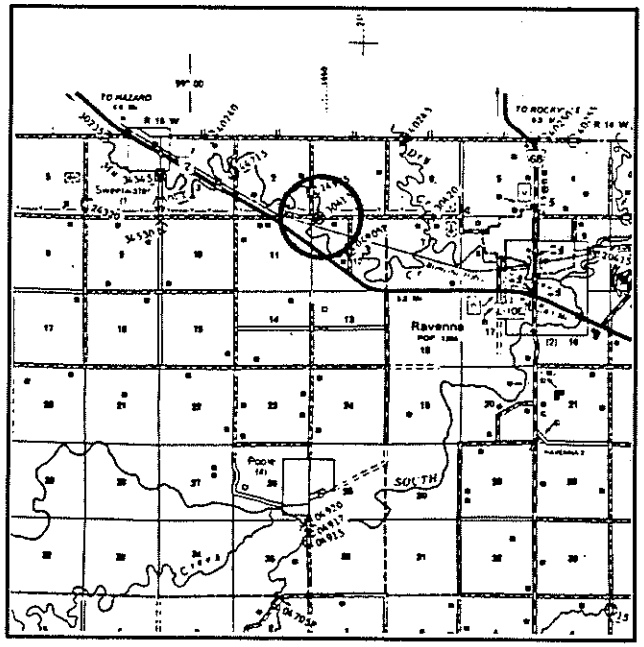
span number:	1	superstructure:	steel, 5-panel, rigid-connected Pratt pony truss
span length:	100.0'	substructure:	steel pile bent abutments with timber wingwalls
total length:	101.0'	floor/decking:	concrete decking over steel stringers
roadway wdt.:	22.8'	other features:	upper chord: 2 channels with cover plates and double lacing; lower chord: 2 channels with batten plates; vertical: 4 angles with continuous plates; diagonal; 2 angles with batten plates; lateral bracing: round bar; floor beam: I-beam field bolted to vertical; guardrail: none

This long-span pony truss carries a gravel-surfaced county road over Mud Creek some three miles northwest of Ravenna. The east-west road is in Beaver Township, separating Sections 1 and 12 in Township 12 North, Range 15 West. The bridge features a five-panel, rigid-connected, Pratt pony truss, evidently fabricated from standard plans by the Nebraska Bureau of Roads and Bridges. There is no builder's plate, and County Supervisors' Records do not specifically mention this bridge, so its exact date of construction is unknown. It appears, though, to have been erected circa 1925, and to have been moved to its present site from another location. Steel for the structure was fabricated by the Inland Steel Company of East Chicago, Indiana, but the contracting firm is unknown. The Mud Creek Bridge is notable for its longer-than-average span length.

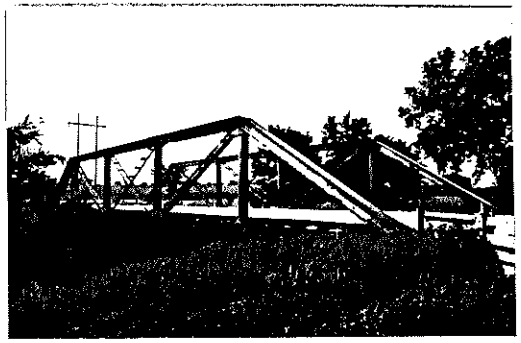
During the 1920s, numerous long-span, rigid-connected Pratt pony trusses were fabricated in Nebraska from standard designs promulgated by the state highway department. The Mud Creek Bridge is one of three remaining examples in Buffalo County of this relatively common structural type, but is otherwise undistinguished among Nebraska's more recent trusses.

NAME(S) OF STRUCTURE
Mud Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001030415; field inspection by Clayton Fraser, 6 July 1989.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser and Paula E.M. Sutton	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Sweetwater Mill Bridge [Mud Creek Bridge] BUFF12
NDOR: C001034545

DATE(S) OF CONSTRUCTION
1909

LOCATION
county road over Mud Creek; S3/4, T12N, R15W
south edge of Sweetwater; Buffalo County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 43)

CONDITION
fair

OWNER
Buffalo County

span number:	1	superstructure:	steel, 5-panel pin-connected Pratt pony truss
span length:	80.0'	substructure:	steel pile bent pier and abutments (original) and timber wingwalls (new)
total length:	93.0'	floor/decking:	new timber decking over new timber stringers
roadway wdt.:	16.0'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 punched rectangular eyebars; vertical: 4 angles with batten plates; diagonal: 2 looped rectangular eyebars, 1 square eyebar with turnbuckle; lateral bracing: round bar; floor beam: I-beam U-bolted to vertical; guardrail: new timber

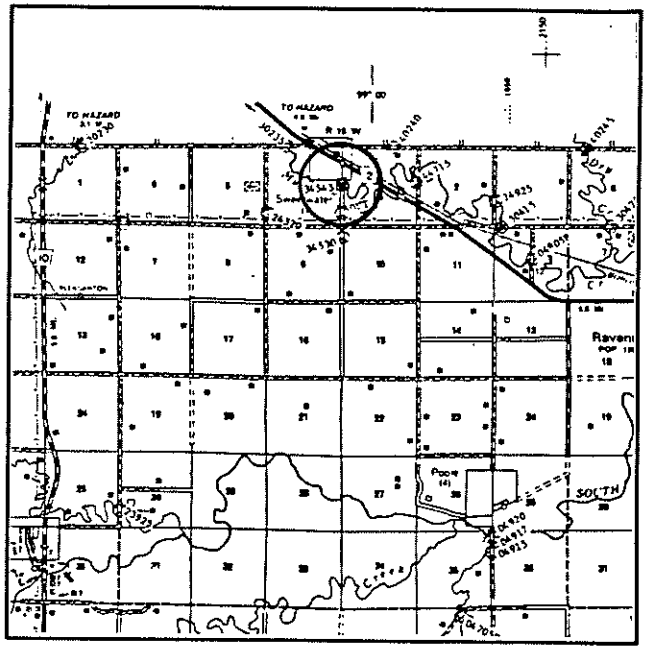
In November 1908 the Buffalo County Board of Supervisors adopted bridge plans prepared by the Standard Bridge Company as the county standards. The board awarded an annual bridge construction contract to Standard two months later, purchasing numerous small-scale bridges from the Omaha-based company throughout 1909. Among the structures ordered in May was this 80-foot pinned pony truss over Mud Creek in Beaver Township. Located at the Sweetwater Mill near the county's northern edge, the truss replaced an earlier bridge at this location, using the existing stringer approaches on both sides of the channel span in conjunction with new H-shaped steel pile bent supports for the truss. Standard completed the bridge later in 1909, using steel components rolled by Illinois Steel Company. The original approach spans on the north and all but one of the south approach spans have been replaced by fill, but the Sweetwater Bridge remains otherwise intact as it carries intermittent traffic on this secondary county road.

Robert Zale Drake, proprietor of the Standard Bridge Company, reportedly developed a new steel pile bent configuration for bridge substructures around 1903. Consisting of a 5-inch channel riveted to the backs of two 8-inch channels, these new built-up H-piles, as they were termed, largely replaced the use of steel cylinder piers in Nebraska. They won overwhelming acceptance (used in 95 per cent of the state's bridges, by one report) among county engineers and in-state bridge companies. The built-up piles were superseded by rolled H sections within ten years, and over the next twenty years some 15,000 bridges were constructed in the state using variations of Drake's H-piling. Although the pinned pony truss of the Sweetwater Bridge is unremarkable as a typical example of a relatively common structural type, the bridge is significant as one of the earliest and best-preserved examples remaining in the state of an original Standard Bridge Company built-up H-pile substructure.

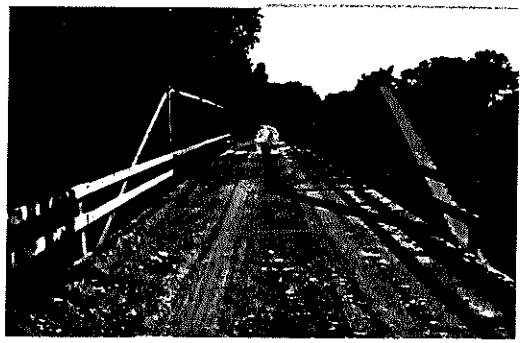
NAME(S) OF STRUCTURE

Sweetwater Mill Bridge [Mud Creek Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001034545; Proceedings of the Buffalo County Board of Supervisors, Book 7: 13 November 1908 (page 140), 15 January 1909 (page 158), 20 May 1909 (pages 180-81), 13 January 1910 (pages 223-24), located at the Buffalo County Courthouse, Kearney, Nebraska; Ted Johnson, "Discussion of Steel Foundations for Steel Bridges Constructed in the Missouri Valley," Nebraska Blue Print 26 (February 1927), 11-12; field inspection by Clayton Fraser, 6 July 1989.

INVENTORIED BY

Clayton B. Fraser and Paula E.M. Sutton

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
County Line Bridge [Dry Creek Bridge] BUFF13
NDOR: C001040245

DATE(S) OF CONSTRUCTION
1914

LOCATION
county road over Dry Creek; S6, T12N, R14W
2.1 miles west of Ravenna; Buffalo County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 33)

CONDITION
fair

OWNER
Buffalo/Sherman Counties

span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt pony truss
span length:	40.0'	substructure:	steel pile bent abutment with timber wingwalls
total length:	42.0'	floor/decking:	earth covered concrete decking over steel stringers
roadway wdt.:	21.0'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 rectangular eyebars; vertical: 4 angles with batten plates; diagonal: 2 round bars; lateral bracing: round bar; floor beam: I-beam bolted to vertical; guardrail: 2 channels

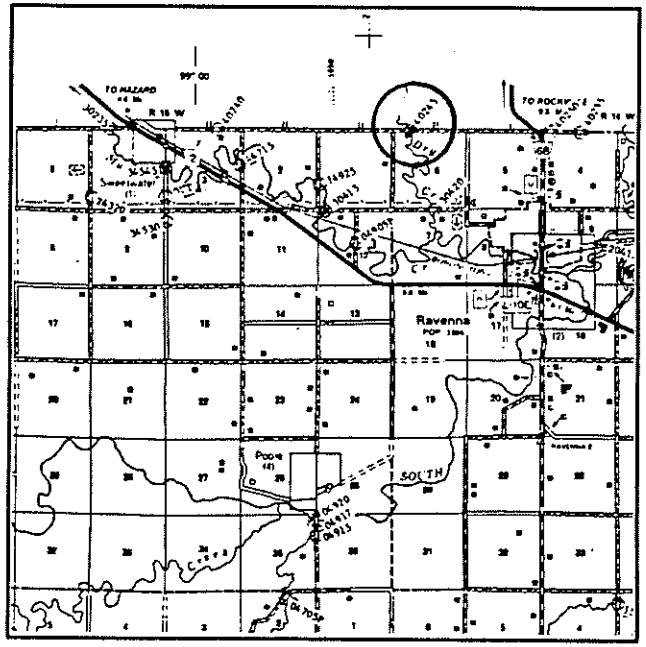
After adopting the company's bridge plans as the county standards, the Buffalo County Board of Supervisors in March 1914 contracted with the Omaha Structural Steel Works to build bridges for the year. That July the board purchased fourteen small-scale structures from Omaha Steel to replace existing bridges damaged by flooding earlier in the year. Among these was a steel structure on the north county line in Garfield Township. Spanning Dry Creek northwest of Ravenna, the single-span bridge consisted of a 40-foot pinned pony truss supported by 30-foot steel piles. The County Line Bridge was completed in 1914 and has functioned intact since.

The County Line Bridge typifies short-span truss construction in Nebraska in the 1910s. Built by one of the state's most prolific bridge erectors during a period of intense bridge construction activity, it fits well within the bridge building milieu of Buffalo County - and Nebraska, generally. Lacking any major historical significance in its present location and typifying an exceedingly common structural type, this bridges lack an appreciable level of historical or technological significance.

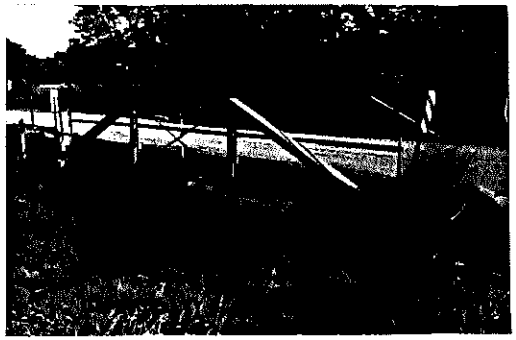
NAME(S) OF STRUCTURE

County Line Bridge [Dry Creek Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001040245; Buffalo County Supervisors' Record, Book 8: 25 February 1914 (page 106), 25 March 1914 (page 113), 15 July 1914 (page 140), located at the Buffalo County Courthouse, Kearney, Nebraska; field inspection by Clayton Fraser and Paula Sutton, 6 September 1989.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser and Paula E.M. Sutton	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
South Loup River Bridge
NDOR: S002 32814

BUFF14

DATE(S) OF CONSTRUCTION
1938

LOCATION
State Highway 2 over South Loup River; S16, T12N, R14W
0.7 mile east of Ravenna; Buffalo County, Nebraska

USE (ORIGINAL / CURRENT)
highway bridge / highway bridge

RATING NRHP non-eligible (score: 24)

CONDITION
excellent

OWNER
Nebraska Department of Roads

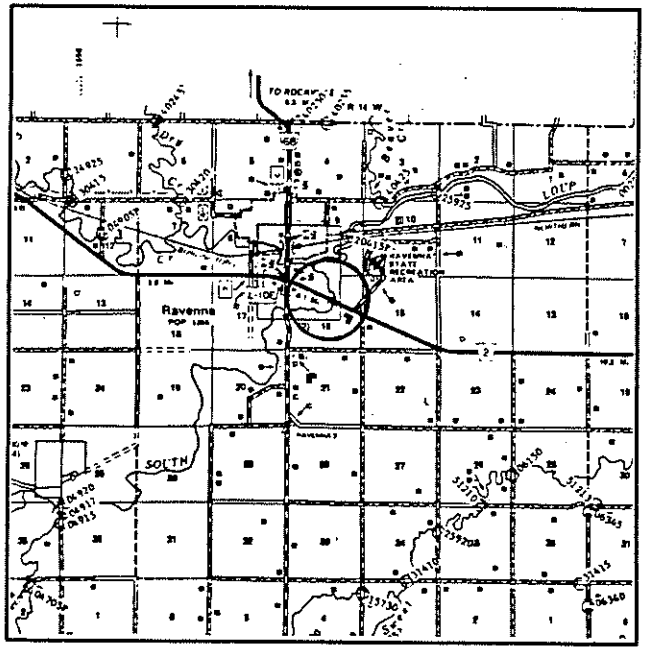
span number:	3	superstructure:	steel stringer
span length:	88.0'	substructure:	concrete abutments, wingwalls and piers
total length:	402.0'	floor/decking:	concrete deck over steel stringers
roadway wdt.:	24.0'	other features:	guardrail: steel pipe with concrete curb and Armco at approaches

The South Loup River Bridge is a primary system structure located in Garfield Township, less than a mile east of Ravenna. It carries State Highway 2 across the South Loup River in Section 16, Township 12 North, Range 14 West. Erected in 1938, the bridge features a steel stringer superstructure supported by concrete abutments, wingwalls and piers. There are three spans with a total length of 402 feet. The only alteration of note involves widening of the roadway by adding stringers and extending the abutments and piers.

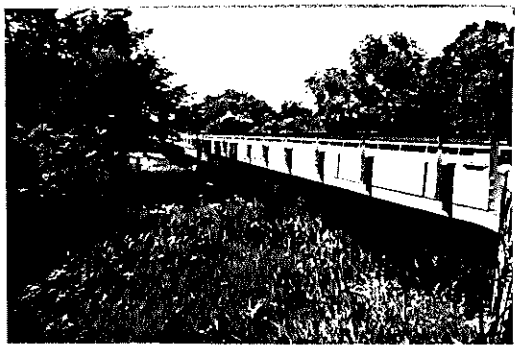
Although its spans are somewhat longer than average among the state's primary system structures, the South Loup River Bridge is otherwise an undistinguished example of a common structural type.

NAME(S) OF STRUCTURE
South Loup River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number S002 32814; field inspection by Clayton Fraser, 11 September 1989.

INVENTORIED BY
Clayton B. Fraser and Paula E.M. Sutton

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Sweet Creek Bridge
NDOR: S002 33674

BUFF15

DATE(S) OF CONSTRUCTION
1939

LOCATION
State Highway 2 over Sweet Creek; S13/24, T12N, R13W
9.3 miles southeast of Ravenna; Buffalo County, Nebraska

USE (ORIGINAL / CURRENT)
highway bridge / highway bridge

RATING NRHP non-eligible (score: 24)

CONDITION
unknown

OWNER
Nebraska Department of Roads

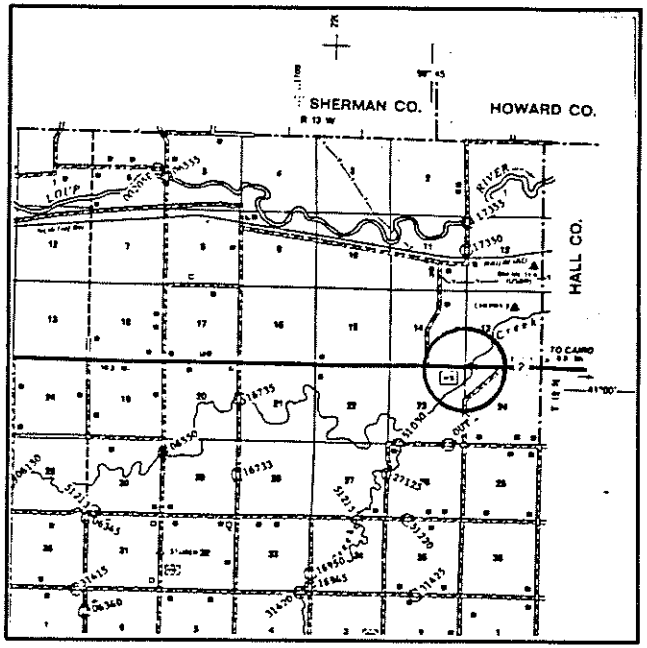
span number:	9	superstructure:	continuous concrete slab
span length:	38.0'	substructure:	concrete abutments, wingwalls and piers
total length:	258.0'	floor/decking:	asphalt over concrete decking
roadway wdt.:	24.0'	other features:	guardrail: steel pipe with concrete curb; Armco at approaches

Bridge Number S002 33674 is a primary system structure located in Cherry Creek Township 9.3 miles east of Ravenna. It carries State Highway 2 across Sweet Creek in Section 13, Township 12 North, Range 13 West. Designed by the state highway department, the bridge was erected in 1939, featuring a continuous concrete slab. It has a concrete deck and concrete abutments, wingwalls and piers. There are nine spans with a total length of 258 feet. The bridge does not appear to have been modified significantly.

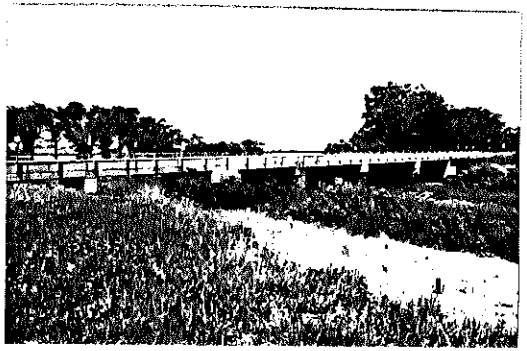
The Sweet Creek Bridge is a typical, late example of a common structural type.

NAME(S) OF STRUCTURE
Sweet Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number S002 33674; field inspection by Clayton Fraser, 11 July 1989.

INVENTORIED BY
Clayton B. Fraser and Paula E.M. Sutton

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Kilgore Bridge [Platte River Bridge] BUFF16
NDOR: S010 04736R

DATE(S) OF CONSTRUCTION
1915

LOCATION
State Highway 10 over North Channel Platte River; S7, T8N, R14W
7.1 miles southeast of Kearney; Buffalo County, Nebraska

USE (ORIGINAL / CURRENT)
highway bridge / roadway bridge

RATING NRHP eligible (score: 61)

CONDITION
good

OWNER
Nebraska Department of Roads

span number:	3	superstructure:	steel, 3-panel, pin- / rigid-connected Pratt pony truss with gussets
span length:	87.0'	substructure:	concrete abutments and wingwalls; steel pile bent piers with concrete caps
total length:	259.0'	floor/decking:	concrete decking over I-beam stringers
roadway wdt.:	15.8'	other features:	upper chord: 2 channels with cover plates and lacing; bottom chord: 2 punched rectangular eyebars; vertical: 4 angles with batten plates; diagonal: 2 punched rectangular eyebars; lateral bracing: round bar; floor beam: I-beam field bolted to vertical; guardrail: 2 channels

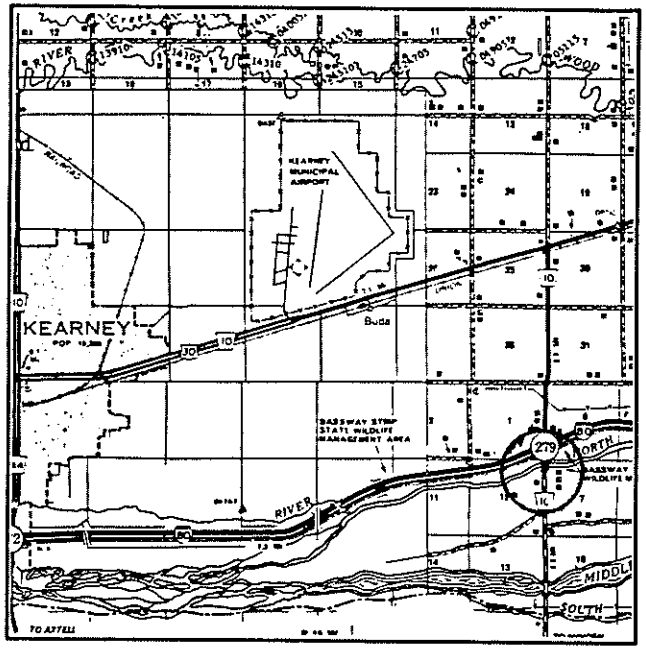
By 1915 Buffalo County had spent years maintaining and repairing the long timber pile bridge over the North Channel of the Platte River southeast of Kearney. That February the board of supervisors moved to replace the Kilgore Bridge. The board adopted standard plans developed by the state engineer and awarded an annual bridge construction contract to the Omaha Structural Steel Works, and then solicited the state engineer's advice on the "most advisable method" to construct a new span at the site of the existing bridge. In June the county placed an order with Omaha Steel for the new Kilgore Bridge: a three-span pony truss on 36-foot steel piling foundations, designed by the state highway department. The contractor began substructural work that summer; in August the supervisors solicited bids for 810 feet of earth fill to constrict the river on the bridge's south end. (They awarded the fill contract to local contractor J. Sherman Bowker in November.) Using components rolled by Lackawanna, Omaha Steel completed the structure by December 1915. The fillwork proved more problematic, however, and it was not until the following December that the work was finally accepted by the board. Total cost of the bridge: $8590; fillwork, $3240. The Kilgore Bridge was later taken over by the state as part of State Highway 10. Though no longer on the highway, it still functions in essentially unaltered condition as a secondary crossing.

A noteworthy example of the state's then-newly formulated pin/rigid connection technology, the Kilgore Bridge is one of the few remaining multiple-span pinned pony trusses in Nebraska. It is further distinguished as one of the few county-built bridges and the only pinned truss remaining on the state's primary system.

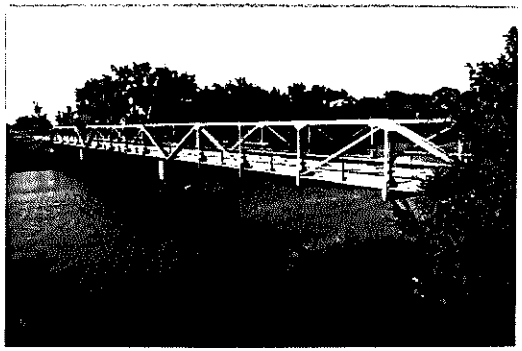
NAME(S) OF STRUCTURE

Kilgore Bridge [Platte River Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number S010 04736R; Proceedings of the Buffalo County Board of Supervisors, Book 8: 24 February 1915 (page 202), 26 March 1915 (page 209), 14 June 1915 (pages 221-222), 27 August 1915 (page 251), 29 September 1915 (page 258), 4 November 1915 (page 261), 14 December 1915 (page 273), 6 January 1916 (page 290), located at the Buffalo County Courthouse, Kearney, Nebraska; field inspection by Clayton Fraser, 11 July 1989.

INVENTORIED BY

Clayton B. Fraser and Paula E.M. Sutton

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Silver Creek Bridge
NDOR: C001103110P

BURT01

DATE(S) OF CONSTRUCTION
ca.1920

LOCATION
county road over Silver Creek; S35, T22N, R10E
4.9 miles northeast of Tekamah; Burt County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 32)

CONDITION
good

OWNER
Burt County

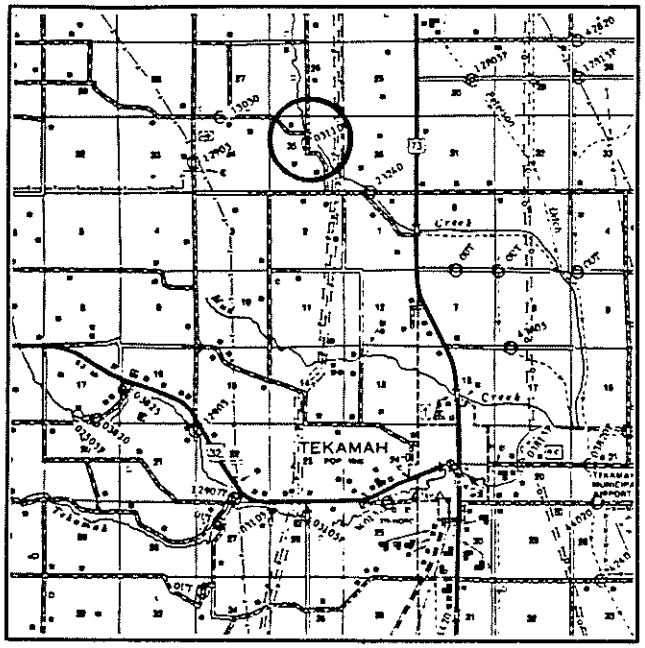
span number:	1	superstructure:	steel, 5-panel, rigid-connected Pratt pony truss with steel stringer approach span
span length:	100.0'	substructure:	steel pile bent abutments and pier
total length:	125.0'	floor/decking:	sheet piling with bituminous overlay over I-beam stringers
roadway wdt.:	16.0'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 channels with batten plates; vertical: built-up I-beam; diagonal: 2 angles with batten plates; floor beam: I-beam, field bolted to vertical below lower chord; lateral bracing: 1 angle; guardrail: 2 angles; plate on southeast hip: **Capacity 20 tons**

This bridge carries a north-south road over Silver Creek northeast of Tekamah, the Burt County seat. Burt County records do not refer specifically to this bridge, but the structure's design indicates that it was built around 1920. Since use of state standard plans was mandatory by 1913, and since Burt County adopted state plans as early as 1908, this bridge was likely a product of state plans. The Standard Bridge Company, a prominent and prolific bridge builder based in Omaha, received Burt County's annual bridge construction contracts from at least 1905 through the 1920s and is most likely the contractor for this structure. Other than the replacement of its original deck with steel sheet decking, the Silver Creek Bridge retains its physical integrity.

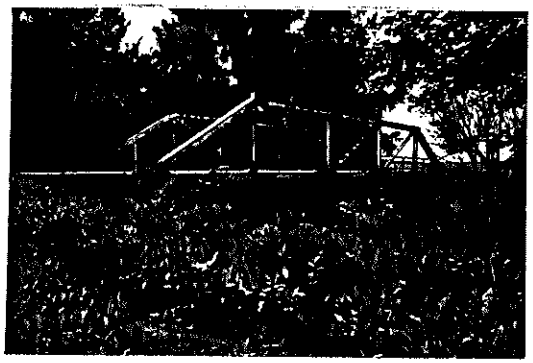
The Silver Creek Bridge is typical of riveted Pratt pony truss bridges built throughout Nebraska in the late 1910s and early 1920s from standard plans provided by the state.

NAME(S) OF STRUCTURE
Silver Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001103110P; Burt County Commissioners' Records, 1895-1924, located at Burt County Courthouse, Tekamah, Nebraska; field inspection by Lon Johnson, 24 July 1989.

INVENTORIED BY	AFFILIATION	DATE
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C001104305P

BURT02

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
township road over Combination Ditch; S11, T20N, R11E
5.6 miles southeast of Tekamah; Burt County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 32)

CONDITION
good

OWNER
Burt County

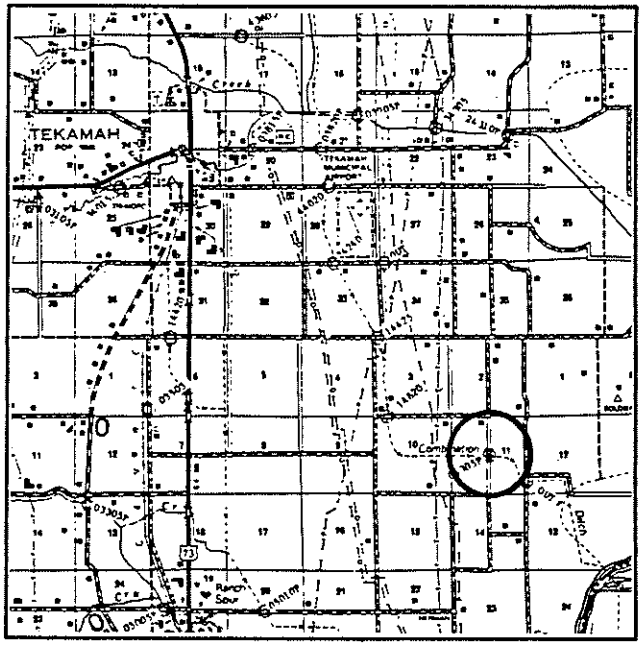
span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt half-hip pony truss with timber stringer approach span
span length:	60.0'	substructure:	built-up "star" piles alternating with I-beams; approach span abutment: I-beam piles
total length:	60.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	15.8'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 looped eye-bars; vertical: paired angles with batten plates; diagonal: 2 square eyerods; counter: eyerod with turnbuckle; floor beam: I-beam, attached to lower chord pin with U-bolt; lateral bracing: round rod with threaded ends; guardrail: none

This Pratt half-hip pony truss carries a north-south road over the Combination Ditch southeast of Tekamah, the Burt County seat. Burt County records do not refer specifically to this structure, but the half-hip design and wood stringers indicate that the structure dates prior to 1913, when counties were required to use state standard plans. These plans did not include half-hip trusses, and allowed only I-beam stringers. Burt County actually adopted state plans as early as 1908, but did not use them exclusively until the following decade. The Standard Bridge Company of Omaha held the county's annual contracts from at least 1905 through the 1920s. This truss bears the earmarks of a Standard Bridge design. It appears unaltered today.

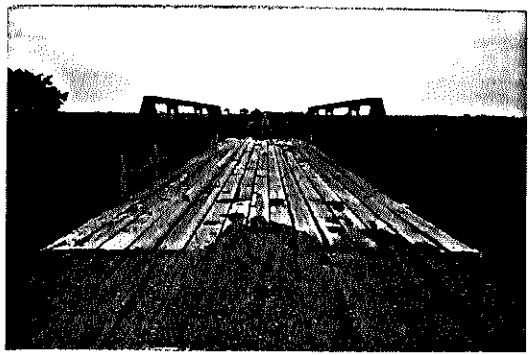
This bridge crosses the Combination Ditch, one of an extensive network of drainage ditches developed in eastern Burt County. The half-hip design was popular in the late nineteenth and early twentieth centuries, before imposition of state standard plans, and many still survive in Nebraska. Because there were no verticals at the hips, the structure used less material and was, therefore, less expensive to fabricate. Numerous half-hip trusses remain in use today on Nebraska's secondary roads. With its construction history largely undocumented, this small bridge is among the less noteworthy examples.

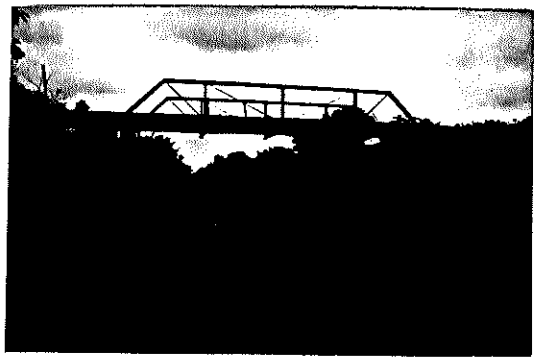
NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001104305P; Burt County Commissioners' Records, 1895-1924, located at Burt County Courthouse, Tekamah, Nebraska, specifically 17 January 1908 (Book 5, p. 634); field inspection by Lon Johnson, 24 July 1989.

INVENTORIED BY	AFFILIATION	DATE
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
South Blackbird Creek Bridge BURT03
NDOR: C001111015

DATE(S) OF CONSTRUCTION
1916

LOCATION
township road over South Blackbird Creek; S3/10, T23N, R9E
5.4 miles northeast of Lyons; Burt County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 33)

CONDITION
good

OWNER
Burt County

span number: 1
span length: 100.0'
total length: 102.0'
roadway wdt.: 19.8'

superstructure: steel, 5-panel, pin-connected Pratt pony truss
substructure: steel pile bent abutments with timber back- and wingwalls
floor/decking: timber deck over I-beam stringers
other features: upper chord: 2 channels with cover plate and lacing; lower chord: 2 punched eye-bars; vertical: paired angles with batten plates; diagonal: 2 eyebars; counter: square eyerod with turnbuckle; sway bracing: pair of angle knee braces stiffened by extensions of the vertical's batten plates; floor beam: I-beam; lateral bracing: round rod with threaded ends; guardrail: 2 channels; endpost-mounted builder's plate: **1916, Minneapolis Steel & Mach. Co., Minneapolis, This Bridge 20-ton Capacity**

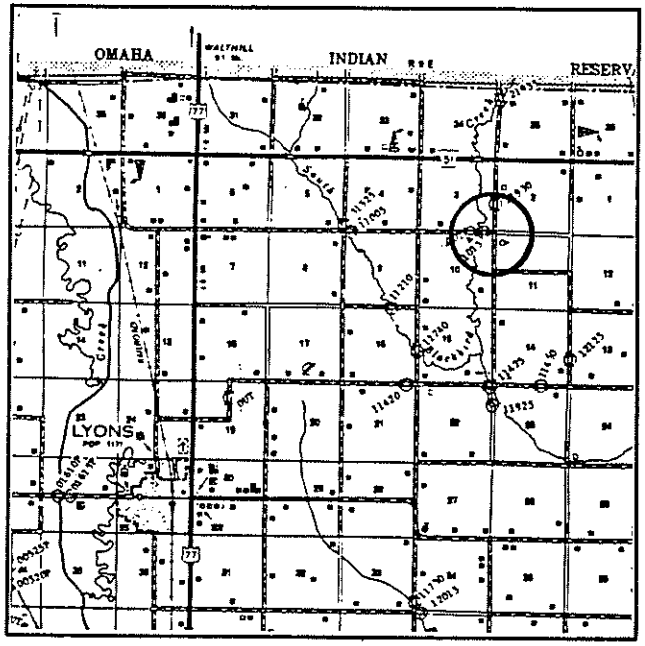
The South Blackbird Creek Bridge was constructed by the Minneapolis Steel and Machinery Company of Minneapolis, Minnesota, in 1916. The appearance of this company is somewhat unusual, since Standard Bridge Company of Omaha received the county's annual bridge construction contracts for most of the first two decades of the 20th century. One possible explanation is that Minneapolis Steel, which fabricated trusses prolifically but rarely erected them, was responsible for the fabrication of this span, and Standard Bridge functioned as the erector. (It is likely that numerous other Minneapolis Steel trusses still exist in Nebraska but are unrecorded, because county records list only contractors, not fabricators.) The other likely explanation is that this truss was erected elsewhere and later acquired and moved to this location by Burt County. This bridge is very similar to another 100-foot Pratt pony truss built in the same year, also by Minneapolis Steel (BURT05). The bridge design is a standard plan of the Nebraska State Engineer. Burt County had adopted state plans in 1908, five years before their use was mandated by state law, but the county initially did not use the plans exclusively.

This bridge is typical of the many small structures built by counties during the first two decades of this century in response to the public's demand for adequate transportation networks. It is the longest pony span included in state plans at the time; through trusses were called upon for longer spans. Unlike many similar structures, the builder and the construction date of this bridge are documented.

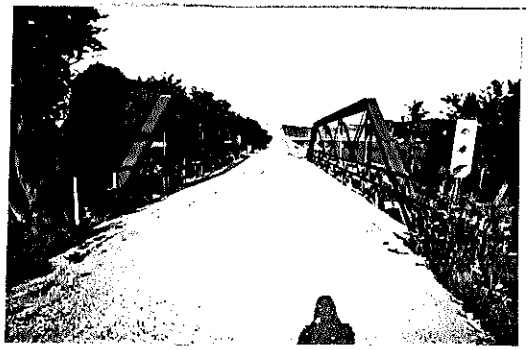
NAME(S) OF STRUCTURE

South Blackbird Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001111015; builder's plate on bridge; Burt County Commissioners' Records, 1895-1924, located at Burt County Courthouse, Tekamah, Nebraska; State of Nebraska, Standard Bridge Plan, Plans on file in the Surveyor's Vault, Cuming County Courthouse, Westpoint, Nebraska. The approximately 50 sheets state that they were designed and drawn by L.W. Erickson, Office of State Engineer and are dated July 3, 1913; field inspection by Lon Johnson, 24 July 1989.

INVENTORIED BY	AFFILIATION	DATE
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C001114405P

BURT04

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
township road over Unnamed stream; S4, T20N, R10E
4.8 miles southwest of Tekamah; Burt County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 32)

CONDITION
good

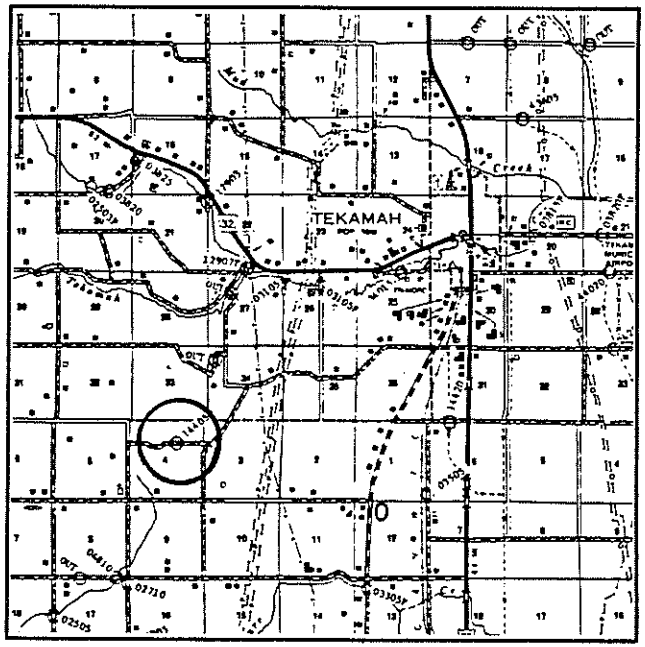
OWNER
Burt County

span number:	1	superstructure:	steel, 5-panel, pin-connected Pratt pony truss
span length:	70.0'	substructure:	steel pile bent abutments with timber backwalls
total length:	70.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.7'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 punched rectangular eyebars; vertical: 2 pair angles with lacing; diagonal: square eyerods; counter: eyebar with turnbuckle; floor beam: I-beam; lateral bracing: round rod with threaded ends; guardrail: lattice

This Pratt pony truss carries a dirt road over a small stream edged by thick vegetation. County records do not refer specifically to this structure. Given the structure's design and construction, but it probably dates from ca.1910. The Standard Bridge Company, a prominent and prolific bridge builder based in Omaha, received Burt County's annual bridge contract for most of the first decades of the 20th century, so Standard Bridge probably erected this structure. It is similar to many surviving bridges dating from before the state's imposition of standard plans in 1913. Lack of documentation about the structure diminishes its interpretive value.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001114405P; Burt County Commissioners' Records, 1895-1924, located at Burt County Courthouse, Tekamah, Nebraska; field inspection by Lon Johnson, 24 July 1989.

INVENTORIED BY	AFFILIATION	DATE
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Silver Creek Bridge
NDOR: C001134305

BURT05

DATE(S) OF CONSTRUCTION
1916

LOCATION
township road over Silver Creek; S22, T21N, R11E
3.4 miles east of Tekamah; Burt County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 33)

CONDITION
good

OWNER
Burt County

span number: 1
span length: 100.0'
total length: 101.0'
roadway wdt.: 15.8'

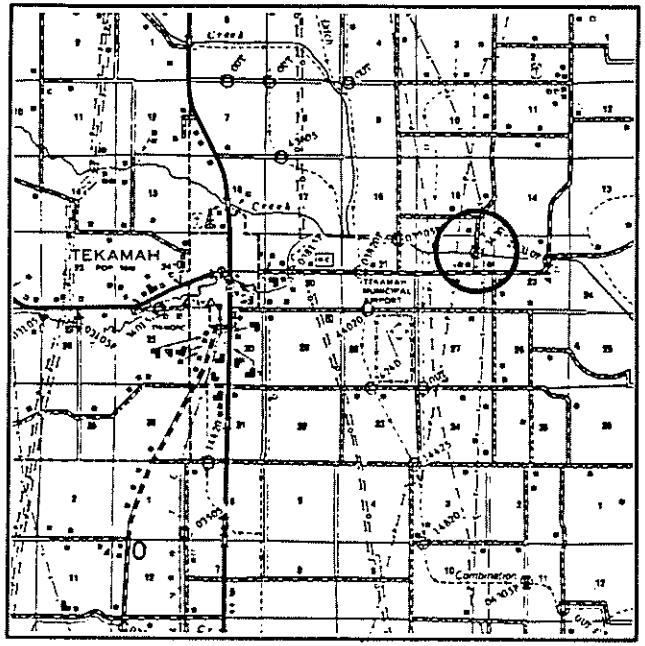
superstructure: steel, 5-panel, pin-connected Pratt pony truss
substructure: I-beam piles with timber backwall (south), sheet piling backwall (north)
floor/decking: timber deck over I-beam stringers
other features: upper chord: 2 channels with cover plate and lacing; lower chord: 2 punched rectangular eyebars; vertical: paired angles with batten plates; diagonal: 2 eyebars; counter: square eyerod with turnbuckle; sway bracing: pair of angle knee braces stiffened by extensions of the vertical's batten plates; floor beam: I-beam; lateral bracing: round rod with threaded ends; guardrail: 2 channels; endpost-mounted builder's plate: **1916, Minneapolis Steel & Mach. Co., Minneapolis, This Bridge 20-ton Capacity**

The Silver Creek Bridge was constructed by the Minneapolis Steel and Machinery Company of Minneapolis, Minnesota, in 1916. The appearance of this company is somewhat unusual, since Standard Bridge Company of Omaha received the county's annual bridge construction contracts for most of the first two decades of the 20th century. One possible explanation is that Minneapolis Steel, which fabricated trusses prolifically but rarely erected them, was responsible for the fabrication of this span, and Standard Bridge functioned as the erector. (It is likely that numerous other Minneapolis Steel trusses still exist in Nebraska but are unrecorded, because county records list only contractors, not fabricators.) The other likely explanation is that this truss was erected elsewhere and later acquired and moved to this location by Burt County. This bridge is very similar to another 100-foot Pratt pony truss built in the same year, also by Minneapolis Steel (BURT03). The bridge design is a standard plan of the Nebraska State Engineer. Burt County had adopted state plans in 1908, five years before their use was mandated by state law, but the county initially did not use the plans exclusively.

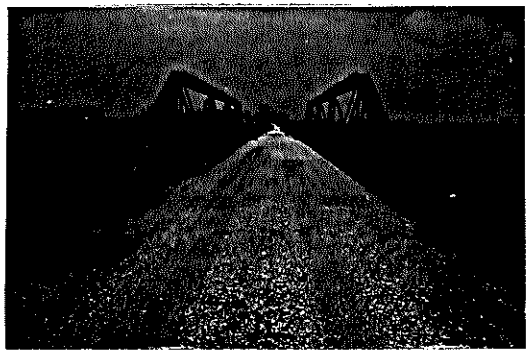
This bridge is typical of the many small structures built by counties during the first two decades of this century in response to the public's demand for adequate transportation networks. It is the longest pony span included in state plans at the time; through trusses were called upon for longer spans. Unlike many similar structures, the builder and the construction date of this bridge are documented.

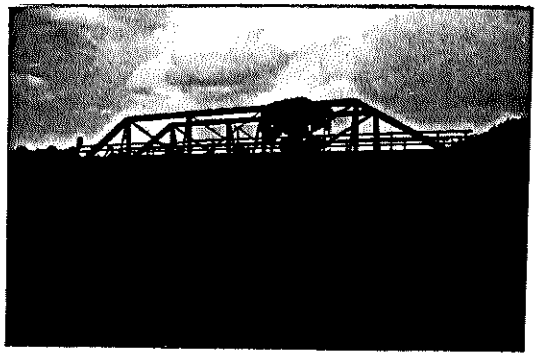
NAME(S) OF STRUCTURE
Silver Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001134305; builder's plate on bridge; Burt County Commissioners' Records, 1895-1924, located at Burt County Courthouse, Tekamah, Nebraska; State of Nebraska, Standard Bridge Plan, Plans on file in the Surveyor's Vault, Cuming County Courthouse, Westpoint, Nebraska. The approximately 50 sheets state that they were designed and drawn by L.W. Erickson, Office of State Engineer and are dated July 3, 1913; field inspection by Lon Johnson, 24 July 1989.

INVENTORIED BY	AFFILIATION	DATE
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Tekamah City Bridge
NDOR: S075 13280

BURT06

DATE(S) OF CONSTRUCTION
1934

LOCATION
U.S. Highway 75 over Tekamah Creek; S19, T21N, R11E
Tekamah; Burt County, Nebraska

USE (ORIGINAL / CURRENT)
highway bridge / highway bridge

RATING potentially NRHP eligible (score: 51)

CONDITION
good

OWNER
State of Nebraska

span number:	1	superstructure:	concrete rigid frame
span length:	48.0'	substructure:	concrete
total length:	51.0'	floor/decking:	concrete
roadway wdt.:	47.0'	other features:	ornate metal balustrade

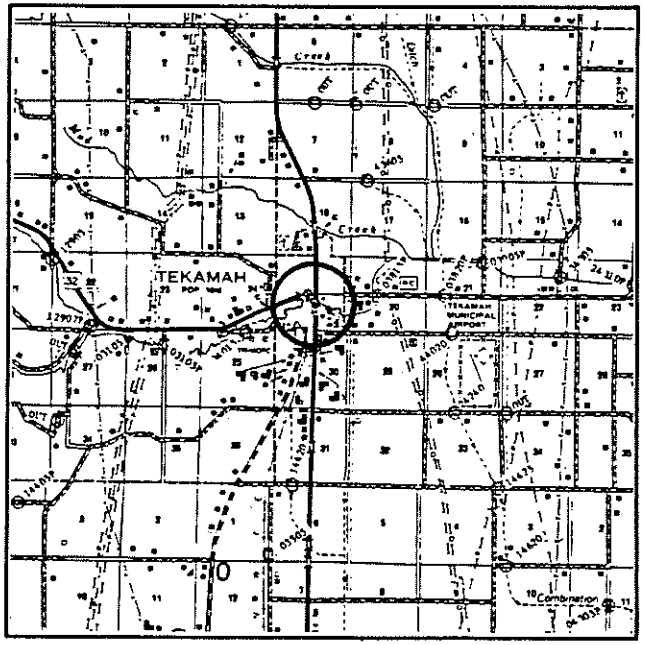
The Nebraska Department of Roads and Irrigation's 1933-34 **Biennial Report** includes two photographs of the old Tekamah City Bridge, a tired-looking Pratt half-hip pony truss, and two views of the attractive new concrete structure that replaced it. The report singles out the Tekamah Bridge and a Dodge County underpass, describing them as "monolithic concrete structures of solid concrete without joints from the bottom of one footing, up and over the span, and down to the bottom of the other footing." It continues that "the slab or deck takes the form of a very flat arch with a comparatively thin slab at the crown. This feature promotes economy and, being of a curved arched shape, it naturally lends itself to a beautifying architectural treatment." The Nebraska Bureau of Roads and Bridges designed this concrete rigid frame structure in February 1934. The project (Project NRM 23-C) was funded using federal relief money, specifically a program which required 25-percent of any appropriation to be used for urban highways. On March 20, 1934, the bureau awarded a construction contract for the bridge to the Koehler Construction Company of Sterling NE for $49,343 (the Lincoln Steel Works fabricated the ornamental guardrails). The Deputy County Superintendent of Highways recalls a dance held on the bridge to celebrate its completion later in 1934. The bridge rests on continuous concrete retaining walls, which appear to have been part of a larger project to channelize Tekamah Creek through the town.

The concrete rigid-frame style, developed in Westchester County, New York, in the early 1920s, became especially popular for federal relief projects during the 1930s. Both picturesque and practical, the flat-arched design appealed to proponents of urban beautification. The Tekamah City Bridge is significant as an early Nebraska example of rigid-frame construction, and one considered worthy of note by contemporary engineers. Today, it and the Saddle Creek Underpass (DOUG11), also built in 1934, are the oldest examples of this structural type in the state. The Tekamah City Bridge is also important as an example of Depression-era federal relief funding which not only improved the nation's infrastructure and provided jobs for the legions of unemployed but also, for the first time, allowed the use of federal highway funds for construction in urban areas.

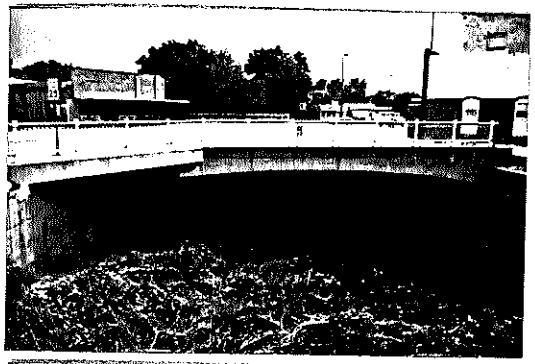
NAME(S) OF STRUCTURE

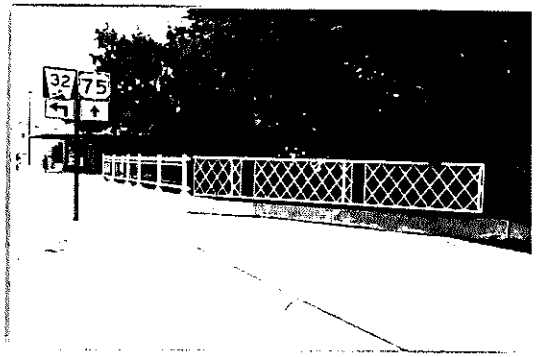
Tekamah City Bridge

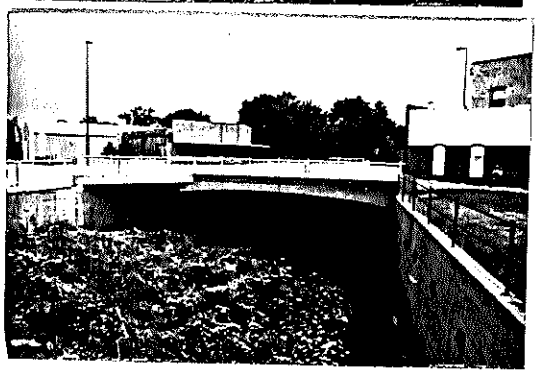
PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP







SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number S075 13280; Nebraska Department of Roads and Irrigation, **Twentieth Biennial Report, 1933-34**, pp. 84, 92-93; Interview with Burt County Deputy Superintendent of Highways, 24 July 1989; City Council Records, 23 July 1934, located at the City Clerk's Office, Tekamah Auditorium, Tekamah, Nebraska; field inspection by Lon Johnson, 24 July 1989.

INVENTORIED BY

Lon Johnson, Renewable Technologies, Inc.

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Broadway Bridge [Elm Creek Bridge] BURT07
NDOR: U0700A3305

DATE(S) OF CONSTRUCTION
ca.1920

LOCATION
Broadway Avenue over Elm Creek; S1, T23N, R10E
Decatur; Burt County, Nebraska

USE (ORIGINAL / CURRENT)
city street bridge / city street bridge

RATING NRHP non-eligible (score: 30)

CONDITION
good

OWNER
Town of Decatur

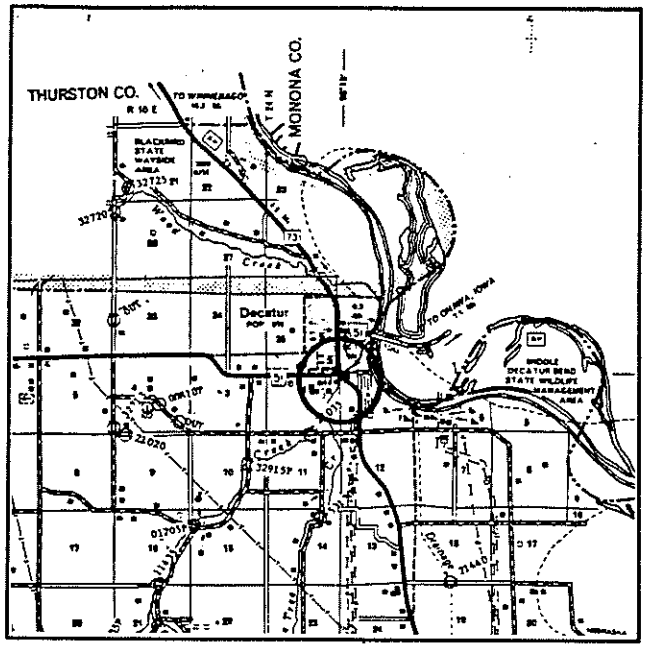
span number:	1	superstructure:	steel, 5-panel, rigid-connected Pratt pony truss
span length:	100.0'	substructure:	steel pile bent abutments; sheet piling back- and wingwalls (north), concrete infill (south)
total length:	101.0'	floor/decking:	concrete deck over I-beam stringers
roadway wdt.:	20.0'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 channels with batten plates; vertical: built-up I-beam; diagonal: 2 angles with batten plates; floor beam: I-beam, field bolted to vertical below lower chord; lateral bracing: round rod with threaded ends; guardrail: 2 channels

The Elm Creek Bridge carries Broadway Avenue, which runs north-south through the town of Decatur. Burt County records do not refer specifically to this bridge. The structure's design indicates that it was built around 1920. Since use of state standard plans was mandatory by 1913, and since Burt County adopted state plans as early as 1908, this bridge was likely a product of state plans. The Standard Bridge Company, a prominent and prolific bridge builder based in Omaha, received Burt County's annual bridge construction contract for most years in the first decades of the twentieth century, so Standard probably erected the structure.

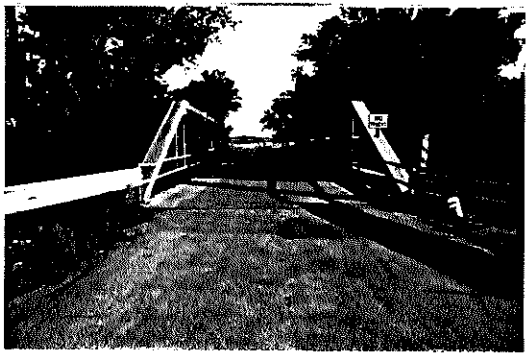
This bridge is typical of riveted Pratt pony truss bridges built throughout Nebraska in the late 1910s and early 1920s from standard plans provided by the state.

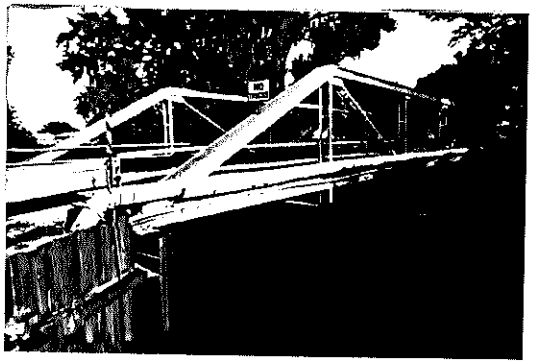
NAME(S) OF STRUCTURE
Broadway Bridge [Elm Creek Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number U0700A3305; Burt County Commissioners' Records, 1895-1924, located at Burt County Courthouse, Tekamah, Nebraska; field inspection by Lon Johnson, 24 July 1989

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Platte River Bridge Clear Creek Bridge
NDOR: C001200305P

BUTL01

DATE(S) OF CONSTRUCTION
1891; moved 1928

LOCATION
township road over South Channel of the Platte River; S5, T16N, R1E
5.8 miles northwest of Bellwood; Butler County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 52)

CONDITION
fair

OWNER
Butler County

span number: 1
span length: 73.0'
total length: 73.0'
roadway wdt.: 16.1'

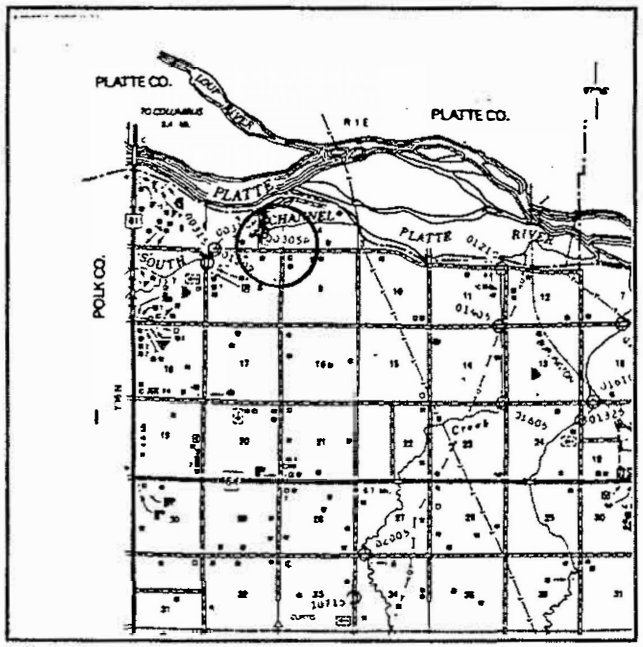
superstructure: wrought iron or steel, 4-panel, pin-connected Warren through truss
substructure: concrete abutments and wingwalls
floor/decking: timber deck over wood stringers
other features: upper chord: paired angles with batten plates along upper flanges and channel plates riveted to lower flanges; lower chord: 2 looped rectangular eyebars; vertical: none; diagonal: 2 angles with batten plates, 2 looped round eyerods with turnbuckles; floor beam: tapered "fishtail" plate girder, U-bolted to lower chord pins; lateral bracing: round rod with threaded ends; guardrail: 2 channels; ornamental cast iron portal braces; portal-mounted builder's plate: **1891, King Bridge Company, Cleveland, O.**; endpost-mounted builder's plate: **Built by King Bridge Company, Cleveland, Ohio, 1891**

This small-scale iron or steel truss carries a secondary county road across a channel of the Platte River about six miles northwest of Bellwood in Butler County's northwest corner. The structure is a pin-connected Warren through truss, resting on concrete abutments and wingwalls. Two bridge plates reveal that the truss was built by the King Iron Bridge Company of Cleveland, Ohio, in 1891. Minutes of the Butler County Commissioners indicate that the bridge was completed and accepted by the county on August 18, 1891. King originally built the span at the small town of Ulysses near the southern edge of Butler County, where it stood for some 38 years. Then, in 1928, the truss was moved to its present location. Here it has carried relatively light, local traffic. As a final alteration, timber and steel piles have been placed under the floor beams, effectively converting the truss into a series of simple stringers.

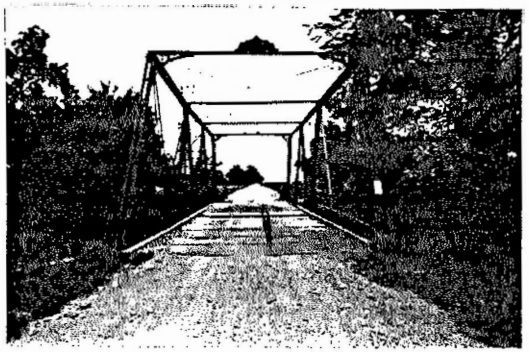
These alterations have substantially compromised the structural and locational integrity of the Platte River Bridge. They are mitigated somewhat by the extreme rarity of this bridge type in Nebraska and the western United States. Although the Warren truss configuration was first patented in 1848, it did not receive widespread acceptance as a vehicular truss type until the development of rigid-connected technology after the turn of the century. Pin-connected Warren trusses are, therefore rare. Only two examples are known to exist in Nebraska, this structure and the Honey Creek Bridge (NEMA11) in Nemaha County. The Platte River Bridge is thus technologically significant as one of the last representatives in the state of this exceptional structural type. It is historically significant as one of the oldest vehicular trusses in Nebraska. Less than a dozen all-metal spans - all but two fabricated by the King Iron Bridge Company - have been documented as older than this truss. The Platte River Bridge thus functions as an important resource in the interpretation of early Nebraska transportation.

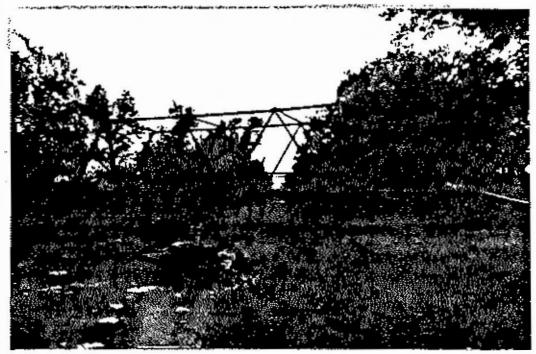
NAME(S) OF STRUCTURE
Platte River Bridge

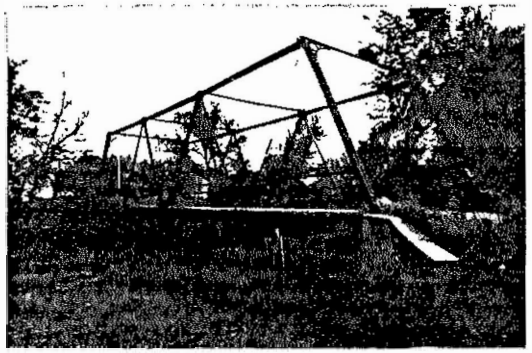
PHOTOS AND SKETCH MAP OF LOCATION

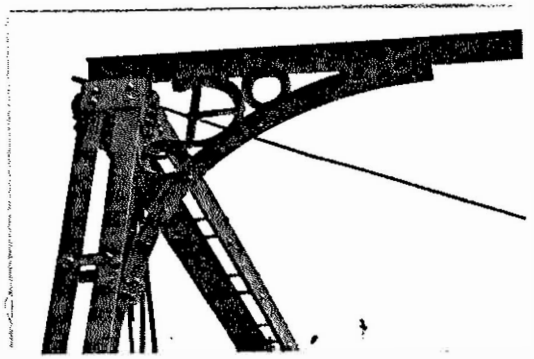


LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP









SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001200305P; Interview with George Koenig (a long-time area resident), 18 July 1989. The date he recalled for moving the bridge corresponds with the date of construction of the replacement bridge; Butler County Supervisors Proceedings, 3 February 1891, located at the Butler County Courthouse, David City, Nebraska; field inspection by Lon Johnson, 18 July 1989.

INVENTORIED BY	AFFILIATION	DATE
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C001200310P

BUTL02

DATE(S) OF CONSTRUCTION
ca.1905

LOCATION
township road over branch of Clear Creek; S5, T16N, R1E
5.9 miles northwest of Bellwood; Butler County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 20)

CONDITION
good

OWNER
Butler County

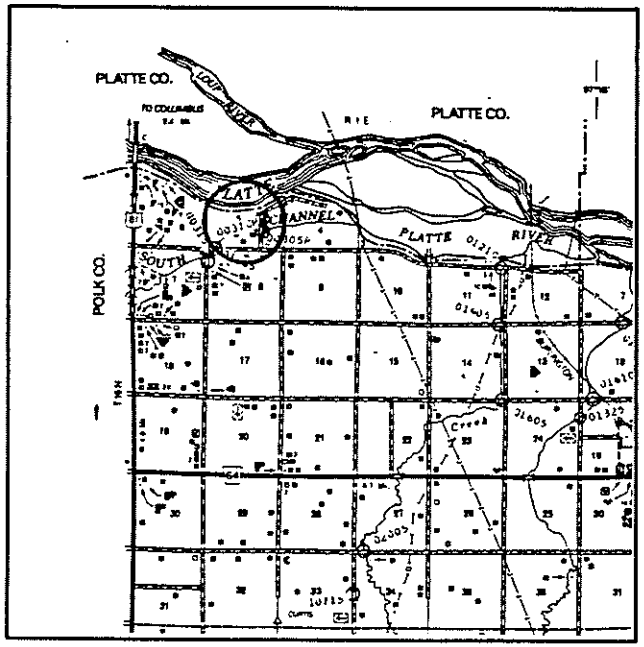
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt half-hip pony truss
span length:	50.0'	substructure:	concrete abutments
total length:	51.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	15.7'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 looped eyebars; vertical: 2 pair angles with lacing; diagonal: 2 looped eyebars at hips, eyerods at center panel; lateral bracing: round rod with threaded ends; floor beam: I-beam; guardrail: gas pipe

This bridge carries a secondary county road across Clear Creek six miles northwest of Bellwood in northwestern Butler County. The structure is comprised of a three-panel, pinned Pratt half-hip pony truss, supported by low concrete abutments. Butler County Supervisors' records did not typically discuss individual bridges. Consequently, details of the truss's construction history remain somewhat vague. Based, though, on its half-hip design, physical condition and pinned-connections, the structure appears to date to circa 1905. Bridge contractors J.R. Sheeley of Lincoln and Charles G. Sheely, of both Lincoln and Denver, alternately held Butler County's annual bridge building contracts from 1900 to 1907. Hence, construction of this modest truss is likely attributable to one of these two firms. Local resident George Koenig remembers that the bridge was moved to its present site in the late 1920s. The span's original location is unknown.

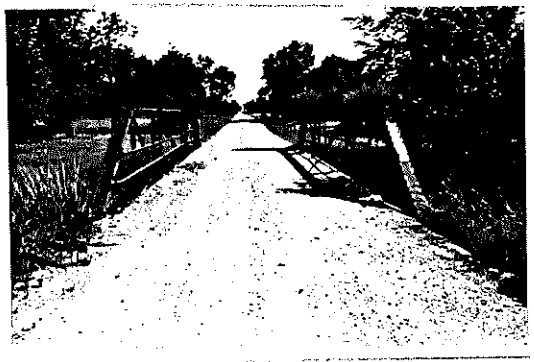
Its construction history largely unknown, the Clear Creek Bridge is a typical example of an exceedingly common vehicular truss type in Nebraska.

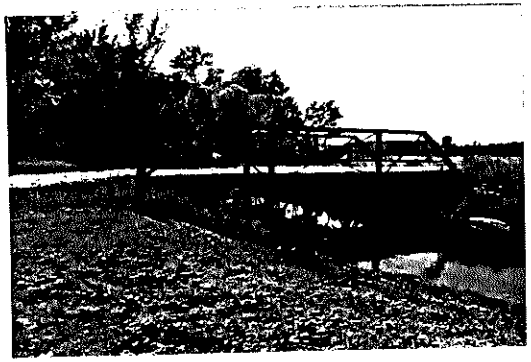
NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001200310P; Butler County Supervisors' Proceedings, Books 3 - 8, covering the period from 1890 to 1921; interview with George Koenig (a long-time area resident), 18 July 1989; field inspection by Lon Johnson 18 July 1989.

INVENTORIED BY	AFFILIATION	DATE
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Big Blue River Bridge
NDOR: C001200505

BUTL03

DATE(S) OF CONSTRUCTION
ca.1905

LOCATION
township road over the Big Blue River; S16/17, T13N, R1E
1.0 mile west of Surprise; Butler County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 14)

CONDITION
excellent

OWNER
Butler County

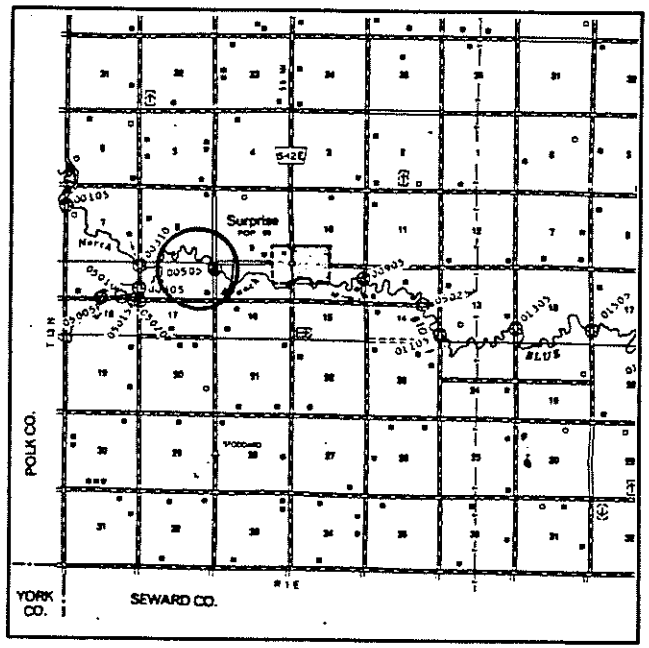
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt half-hip pony truss with I-beam approach spans
span length:	43.0'	substructure:	steel I-beam pile piers; concrete abutments and wingwalls
total length:	63.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	14.9'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars; vertical: 2 pair angles with lacing; diagonal and counter: looped eyebars; lateral bracing: round rod with threaded ends; floor beam: I-beam, field bolted to vertical below lower chord; guardrail: steel pipe

This bridge carries a secondary county road across the Big Blue River one mile west of Surprise in southwestern Butler County. The structure is comprised of a three-panel, pinned Pratt half-hip pony truss, supported by steel pile bent piers and concrete abutments and wingwalls. Butler County Supervisors' records did not typically discuss individual bridges. Consequently, details of the truss's construction history remain somewhat vague. Based, though, on its half-hip design, physical condition and pinned-connections, the structure appears to date to circa 1905. Bridge contractors J.R. Sheeley of Lincoln and Charles G. Sheely, of both Lincoln and Denver, alternately held Butler County's annual bridge building contracts from 1900 to 1907. Hence, construction of this modest truss is likely attributable to one of these two firms. At some point recently, angles have been welded to the verticals on the bridge's east side, compromising the truss's physical integrity.

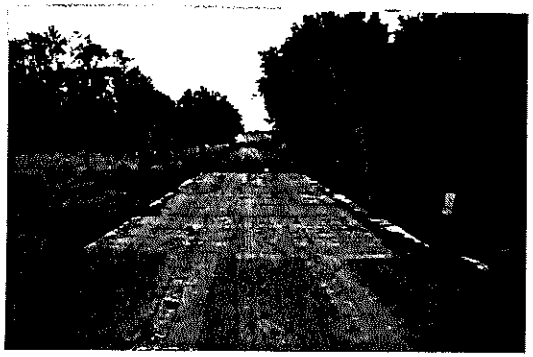
The Big Blue River Bridge is a typical example of a common structural type, apparently lacking sufficient levels of either significance or integrity.

NAME(S) OF STRUCTURE
Big Blue River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001200505; Butler County Supervisors' Proceedings, Books 3 - 8, covering the period from 1890 to 1921; field inspection by Lon Johnson, 18 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Big Blue River Bridge
NDOR: C001200905

BUTL04

DATE(S) OF CONSTRUCTION
1897-98

LOCATION
township road over branch of Big Blue River; S15, T13N, R1E
1.0 mile southeast of Surprise; Butler County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 51)

CONDITION
good

OWNER
Butler County

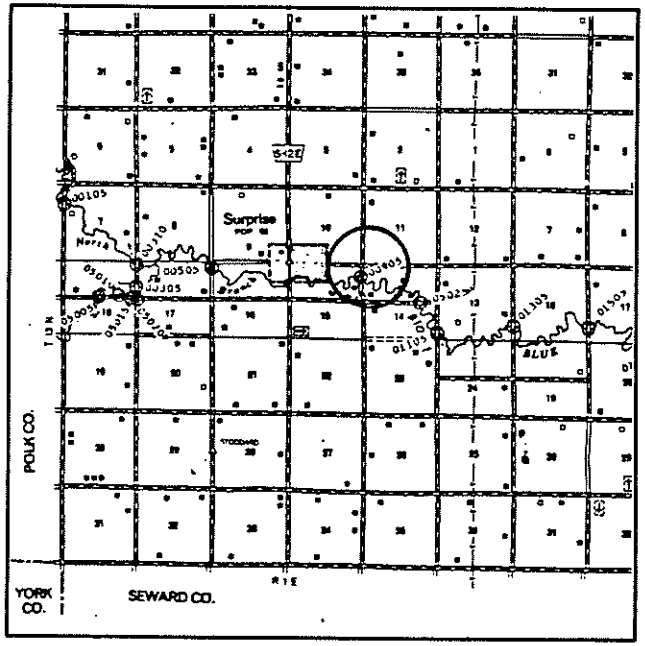
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt truss leg bedstead with I-beam approach spans
span length:	40.0'	substructure:	steel bedstead legs; concrete abutments and wingwalls
total length:	66.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.9'	other features:	upper chord: paired channels with cover plate and lacing; lower chord: two angles with batten plates; vertical: two pair of angles riveted with lacing; diagonal: square eyerods; counter: eyerod with turnbuckle; floor beam: I-beam, U-bolted to lower chord pin at vertical; lateral bracing: round rod with threaded ends; guard rail: 2 channels, builder's plate on bridge: **Canton Bridge Company, Canton Ohio**

Located in Section 15 of T13N, R1W, one mile southeast of Surprise, this small-scale bridge carries an unpaved county road over a branch of the Big Blue River. The structure consists of a single-span pinned Pratt bedstead, flanked on each side by a single steel stringer approach. According to county records, on December 14, 1897, the Butler County Supervisors awarded a contract to the Canton Bridge Company for a $500 for an iron (actually steel) bridge over the Blue River near Surprise. Using components rolled in Pittsburgh by Jones and Laughlin, the Ohio-based bridge contractor evidently erected this bedstead early the next year. The Big Blue River Bridge has functioned in place since, with only minor alteration.

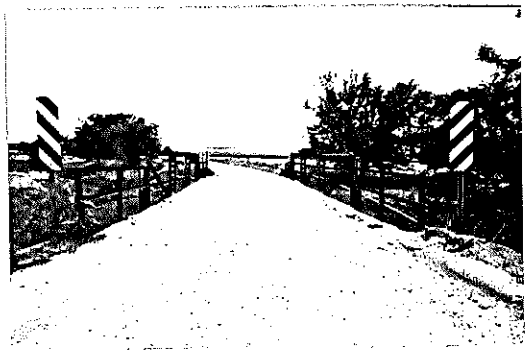
Though never as popular as the pony truss, the truss leg bedstead was a standard bridge type marketed in the late 19th and early 20th century by such midwestern firms as the Canton Bridge Company. The structure acts as a rigid frame, with its endposts extended below the truss itself to form the supports. This was both the strength and the weakness of the bedstead. The combined super-and substructure reduced erection costs somewhat, but they were prey to flood and collision damage and suffered from inherent structural weakness relating to compression stress in the lower chords. Between about 1896, when they were first built in Nebraksa, and the first decade ofthe 20th century, a number of bedsteads were built in the state. Through attrition, however, all but a dozen have since been demolished. (Of these, half employ pinned Pratt configurations.) The Big Blue River Bridge is significant as one of the oldest documentable examples in Nebraska of this peculiar structural type.

NAME(S) OF STRUCTURE
Big Blue River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001200905; Proceeding from the Butler County Supervisors, 14 December 1897, located at the Butler County Courthouse, David City; field inventory by Lon Johnson, 18 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C001202215

BUTL05

DATE(S) OF CONSTRUCTION
ca.1905

LOCATION
township road over unnamed stream; S5, T15, R4E
2.9 miles northwest of Burno; Butler County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 20)

CONDITION
good

OWNER
Butler County

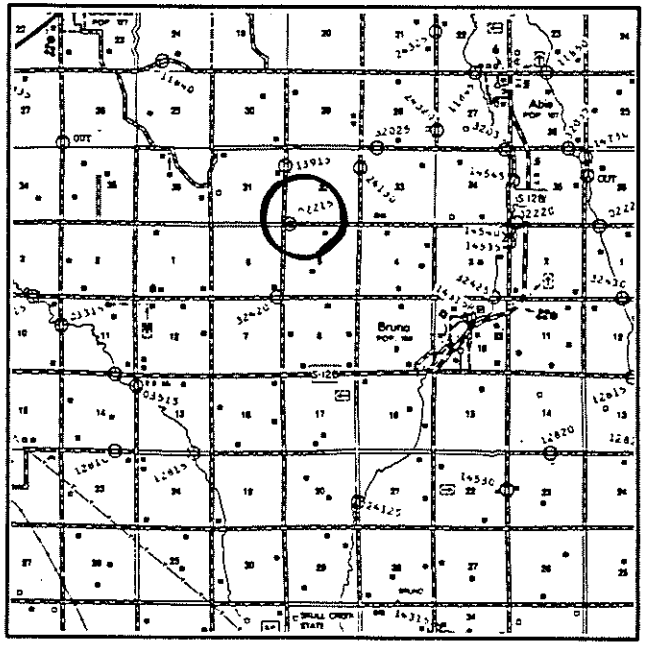
span number:	1	superstructure:	steel, 2-panel, pin-connected Pratt half-hip pony truss
span length:	30.0'	substructure:	steel I-beam piles with sheet piling back- and wingwalls
total length:	31.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.0'	other features:	top chord: 2 channels with cover and batten plates; bottom chord: 2 looped eyebars; vertical: 2 pair angles with lacing; diagonal: looped eyebars; lateral bracing: round rod with threaded ends; floor beam: I-beam, field bolted to vertical below lower chord; guardrail: none

This small-scale bridge carries a secondary county road across an unnamed stream three miles northwest of Burno in northeastern Butler County. The structure is comprised of a two-panel, pinned Pratt half-hip pony truss, supported by steel pile bent abutments. Butler County Supervisors' records did not typically discuss individual bridges. Consequently, details of the truss's construction history remain somewhat vague. Based, though, on its half-hip design, physical condition and pinned-connections, the structure appears to date to circa 1905. Bridge contractors J.R. Sheeley of Lincoln and Charles G. Sheely, of both Lincoln and Denver, alternately held Butler County's annual bridge building contracts from 1900 to 1907. Hence, construction of this modest truss is likely attributable to one of these two firms. The bridge appears to have been altered minimally over the years with only minor maintenance-related work. As such, this small span has retained an average degree of historical integrity.

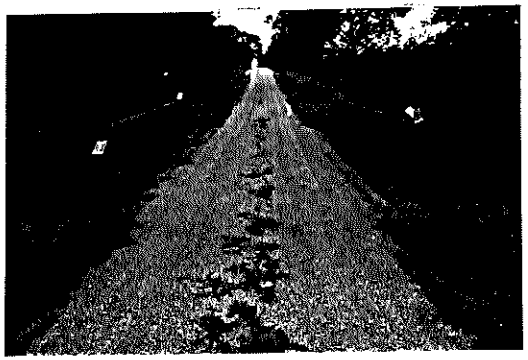
This bridge typifies small-scale truss construction in Nebraska in the early 20th century.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001202215; Butler County Supervisors Proceedings, Books 3 - 8, covering the period from 1890 to 1921; field inspection by Lon Johnson, 18 July 1989.

INVENTORIED BY	AFFILIATION	DATE
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bone Creek Bridge
NDOR: C001202920

BUTL06

DATE(S) OF CONSTRUCTION
ca.1905

LOCATION
township road over Bone Creek; S32/33, T16N, R3E
3.0 miles southwest of Octavia; Butler County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 20)

CONDITION
good

OWNER
Butler County

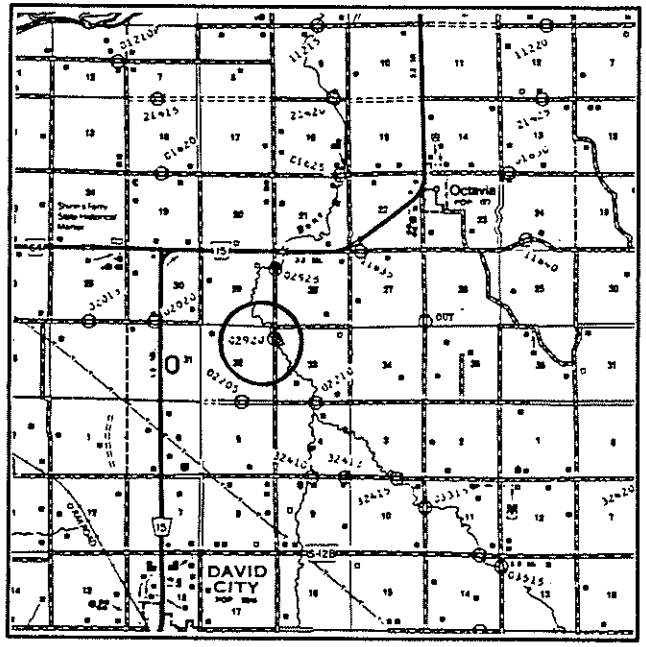
span number:	1	superstructure:	steel, 2-panel, pin-connected Pratt half-hip pony truss
span length:	30.0'	substructure:	steel I-beam piles w/ timber back- and wingwalls
total length:	30.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	17.8'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 looped eyebars; vertical: 2 pair angles with lacing; diagonal: looped eyebars; lateral bracing: round rod with threaded ends; floor beam: I-beam, field bolted to vertical below lower chord; guardrail: 2 angles

This bridge carries a gravel-surfaced county road across Bone Creek three miles southwest of Octavia in northeastern Butler County. The structure is comprised of a two-panel, pinned Pratt half-hip pony truss, supported by steel piles with timber back- and wingwalls. Butler County Supervisors' records did not typically discuss individual bridges. Consequently, details of the truss's construction history remain somewhat vague. Based, though, on its half-hip design, physical condition and pinned-connections, the structure appears to date to circa 1905. Bridge contractors J.R. Sheeley of Lincoln and Charles G. Sheely, of both Lincoln and Denver, alternately held Butler County's annual bridge building contracts from 1900 to 1907. Hence, construction of this modest truss is likely attributable to one of these two firms. The bridge appears to have been altered minimally over the years with only minor maintenance-related work. As such, this small span has retained an average degree of historical integrity.

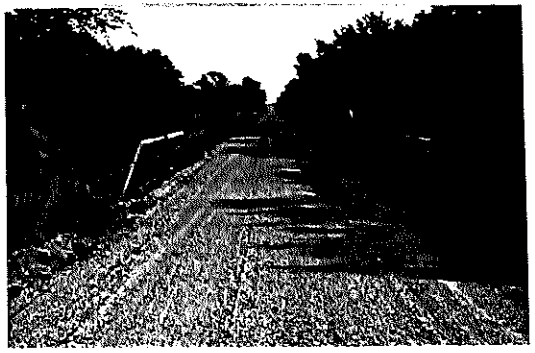
The Bone Creek Bridge is an undistinguished example of an exceedingly common vehicular truss type in Nebraska.

NAME(S) OF STRUCTURE
Bone Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001202920; Butler County Supervisors Proceedings, Books 3 - 8, covering the period from 1890 to 1921; field inspection by Lon Johnson, 18 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bone Creek Bridge
NDOR: C001202925

BUTL07

DATE(S) OF CONSTRUCTION
ca.1905

LOCATION
township road over Bone Creek; S28/29, T16N, R3E
2.5 miles southwest of Octavia; Butler County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 20)

CONDITION
fair

OWNER
Butler County

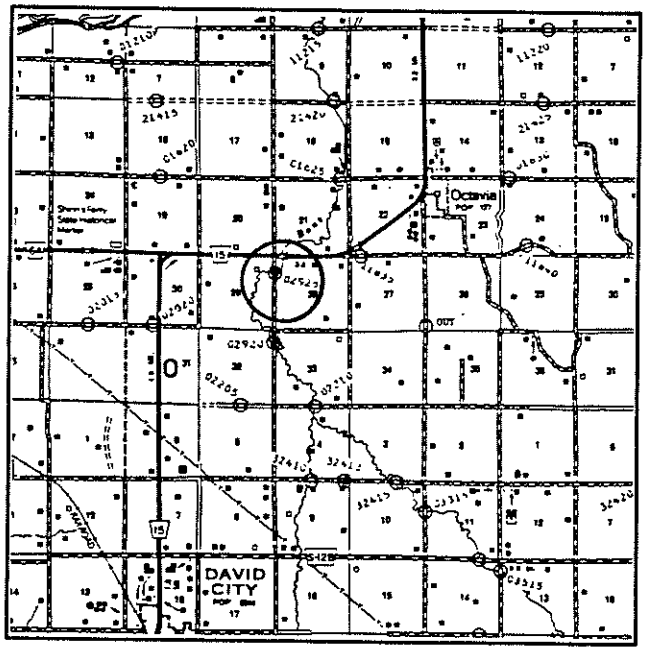
span number:	1	superstructure:	steel, 2-panel, pin-connected Pratt half-hip pony truss with I-beam approach
span length:	30.0'	substructure:	steel I-beam piles with timber back- and wingwalls
total length:	45.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	17.7'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 looped eyebars; vertical: 2 pair angles with lacing; diagonal: looped eyebars; lateral bracing: round rod with threaded ends; floor beam: I-beam, field bolted to vertical below lower chord; guardrail: 2 angles

Evidently moved to this location, the Bone Creek Bridge carries an unpaved county road 2-1/2 miles southwest of Octavia in northeastern Butler County. The structure is comprised of a two-panel, pinned Pratt half-hip pony truss with a single steel stringer approach span on the south end. The structure rests on steel piles with timber back and wingwalls. Butler County Supervisors' records did not typically discuss individual bridges. Consequently, details of the truss's construction history remain somewhat vague. Based, though, on its half-hip design, physical condition and pinned-connections, the structure appears to date to circa 1905. Bridge contractors J.R. Sheeley of Lincoln and Charles G. Sheely, of both Lincoln and Denver, alternately held Butler County's annual bridge building contracts from 1900 to 1907. Hence, construction of this modest truss is likely attributable to one of these two firms.

The Bone Creek Bridge is an undistinguished example of an exceedingly common vehicular truss type in Nebraska.

NAME(S) OF STRUCTURE
Bone Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001202925; Butler County Supervisors Proceedings, Books 3 - 8, covering the period from 1890 to 1921; field inspection by Lon Johnson, 18 July 1989.

INVENTORIED BY	AFFILIATION	DATE
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge BUTL08
NDOR: C001205005P

DATE(S) OF CONSTRUCTION
ca.1900

LOCATION
township road over north branch of Big Blue River; S18, T13N, R1E
2.6 miles southwest of Surprise; Butler County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 41)

CONDITION
good

OWNER
Butler County

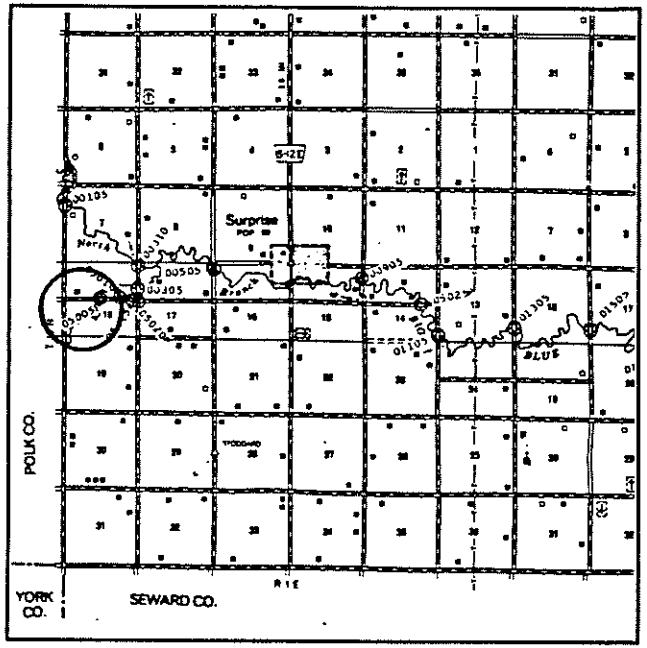
span number:	1	superstructure:	steel, 3-panel, rigid-connected Warren truss leg bedstead
span length:	40.0'	substructure:	concrete abutments with sloping wingwalls
total length:	40.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.8'	other features:	upright end post: 2 channels with cover and batten plates; top chord: 2 angles with batten plates; bottom chord, vertical, and diagonal: 2 angles with batten plates; lateral bracing: rods (rod with sleeve-like spacers penetrates stringers at the mid-span of each panel); guardrail: lattice

This riveted Warren bedstead carries a gravel-surfaced county road over the north branch of the Big Blue River 2-1/2 miles southwest of Surprise near the Polk County line. Butler County Supervisors' records did not typically discuss individual bridges. Consequently, details of the truss's construction history remain somewhat vague. Based, though, on its half-hip design, physical condition and pinned-connections, the structure appears to date to circa 1905. Bridge contractors J.R. Sheeley of Lincoln and Charles G. Sheely, of both Lincoln and Denver, alternately held Butler County's annual bridge building contracts from 1900 to 1907. Hence, construction of this modest truss is likely attributable to one of these two firms.

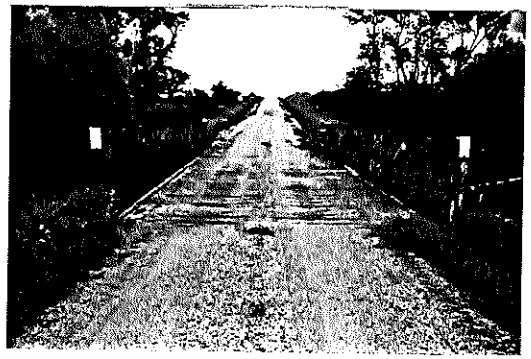
Though once a common vehicular truss type, truss-leg bedsteads are now relatively rare in Nebraska. This structure is a well-preserved example of this early configuration: one of only five of its type identified in the statewide bridge inventory (three are located in Cass County). However, the lack of archival information on the bridge limits its interpretive value and diminishes its significance.

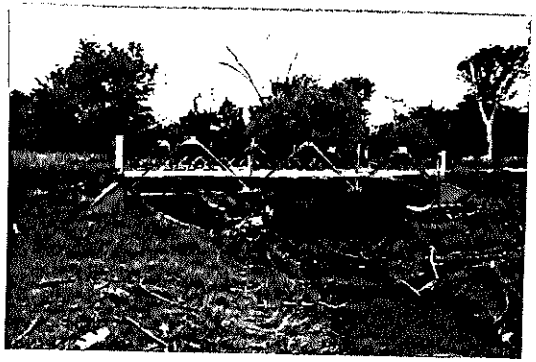
NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001205005P; Butler County Supervisors Proceedings, Books 3 - 8, covering the period from 1890 to 1921; field inventory by Lon Johnson, 18 July 1989.

INVENTORIED BY	AFFILIATION	DATE
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C001205015

BUTL09

DATE(S) OF CONSTRUCTION
ca.1905

LOCATION
township road over unnamed stream; S8/17, T13N, R3E
5.1 miles northwest of Dwight; Butler County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 20)

CONDITION
fair

OWNER
Butler County

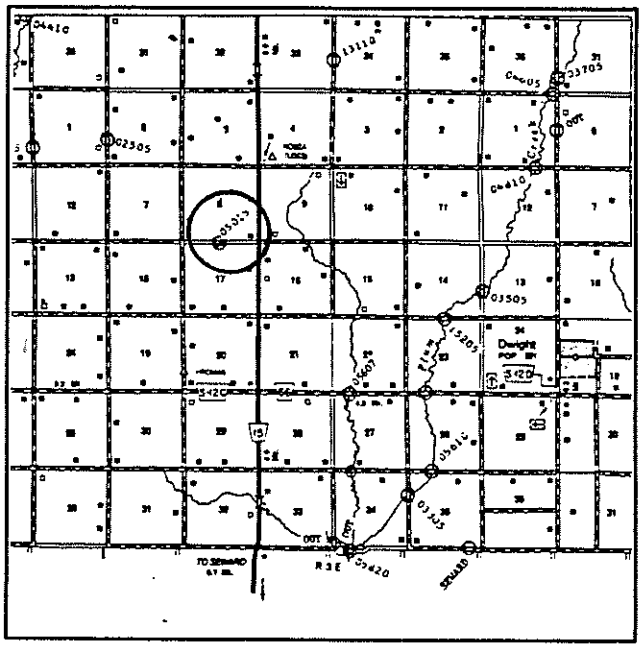
span number:	1	superstructure:	steel, 2-panel, pin-connected Pratt half-hip pony truss
span length:	27.0'	substructure:	steel I-beam piles with timber back- and wingwalls
total length:	28.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	16.0'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: looped eyebars; vertical: 2 pair angles with lacing; diagonal: looped eyebars; lateral bracing: not visible, water too high; floor beam: I-beam; guardrail: 2 angles

This bridge carries a gravel-surfaced county road across an intermittent stream five miles northwest of Dwight in southeastern Butler County. The structure is comprised of a two-panel, pinned Pratt half-hip Pratt pony truss, supported by steel piles with timber back and wingwalls. Butler County Supervisors' records did not typically discuss individual bridges. Consequently, details of the truss's construction history remain somewhat vague. Based, though, on its half-hip design, physical condition and pinned-connections, the structure appears to date to circa 1905. Bridge contractors J.R. Sheeley of Lincoln and Charles G. Sheely, of both Lincoln and Denver, alternately held Butler County's annual bridge building contracts from 1900 to 1907. Hence, construction of this modest truss is likely attributable to one of these two firms.

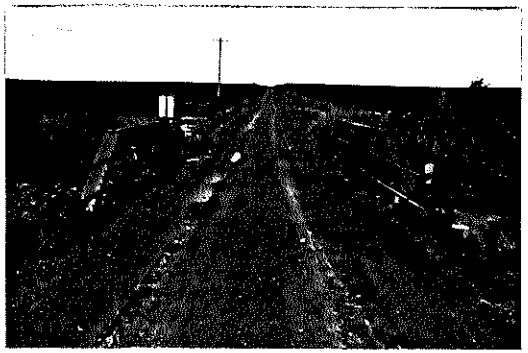
With its construction history largely undocumented, this small-scale structure is a typically configured example of a common structural type.

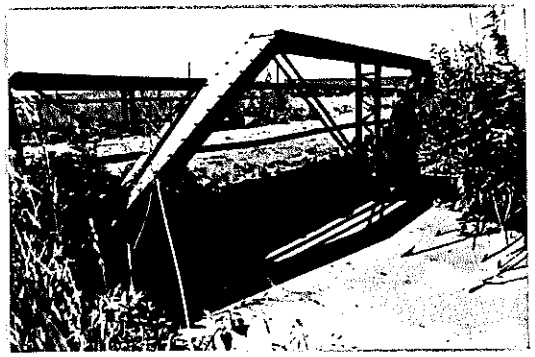
NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001205015; Butler County Supervisors Proceedings, Books 3 - 8, covering the period from 1890 to 1921; field inspection by Lon Johnson, 18 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Oak Creek Bridge
NDOR: C001205835

BUTL10

DATE(S) OF CONSTRUCTION
ca.1905

LOCATION
county road over Oak Creek; S34/35, T13N, R4E
4.5 miles southeast of Dwight; Butler County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 20)

CONDITION
fair

OWNER
Butler County

span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt half-hip pony truss
span length:	50.0'	substructure:	steel I-beam piles with timber back- and sidewalls
total length:	50.0'	floor/decking:	timber deck over pressure treated wood stringers
roadway wdt.:	16.0'	other features:	top chord: 2 channels with cover and batten plates; bottom chord: 2 looped eyebars; vertical: 2 pair angles with batten plates; diagonal: looped eyebars; counter: rods; floor beam: I-beam, field bolted to vertical below lower chord; guardrail: 2 angles

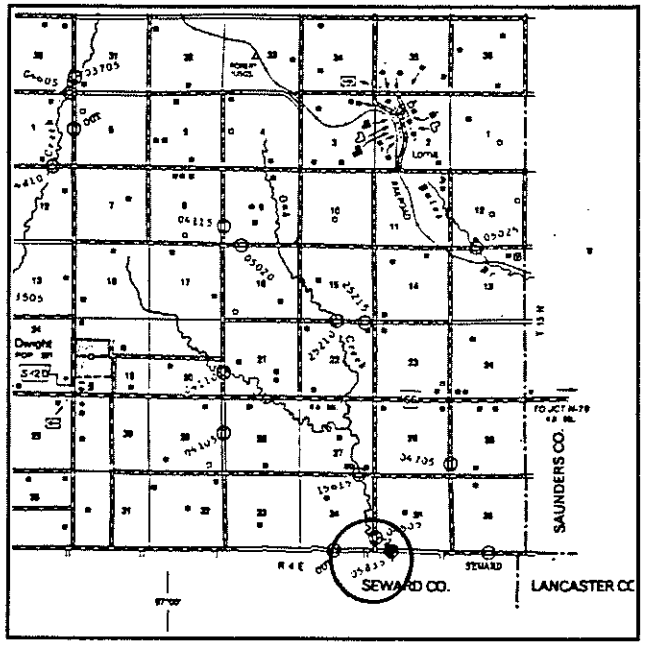
This bridge carries an unimproved county road over Oak Creek 4-1/2 miles southeast of Dwight on the Seward County line. The structure is comprised of a three-panel, pinned Pratt half-hip pony truss, supported by steel piles with timber back and sidewalls. Butler County Supervisors' records did not typically discuss individual bridges. Consequently, details of the truss's construction history remain somewhat vague. Based, though, on its half-hip design, physical condition and pinned-connections, the structure appears to date to circa 1905. Bridge contractors J.R. Sheeley of Lincoln and Charles G. Sheely, of both Lincoln and Denver, alternately held Butler County's annual bridge building contracts from 1900 to 1907. Hence, construction of this modest truss is likely attributable to one of these two firms.

The Oak Creek Bridge is an undistinguished and largely undocumented example of a common vehicular truss type in Nebraska.

NAME(S) OF STRUCTURE

Oak Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001205835; Butler County Supervisors Proceedings, Books 3 - 8, covering the period from 1890 to 1921; field inspection by Lon Johnson, 18 July 1989.

INVENTORIED BY	AFFILIATION	DATE
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C001232413

BUTL11

DATE(S) OF CONSTRUCTION
1904

LOCATION
township road over unnamed stream; S4/9, T15N, R3E
3.9 miles northeast of David City; Butler County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 35)

CONDITION
fair

OWNER
Butler County

span number: 1
span length: 40.0'
total length: 40.0'
roadway wdt.: 20.0'

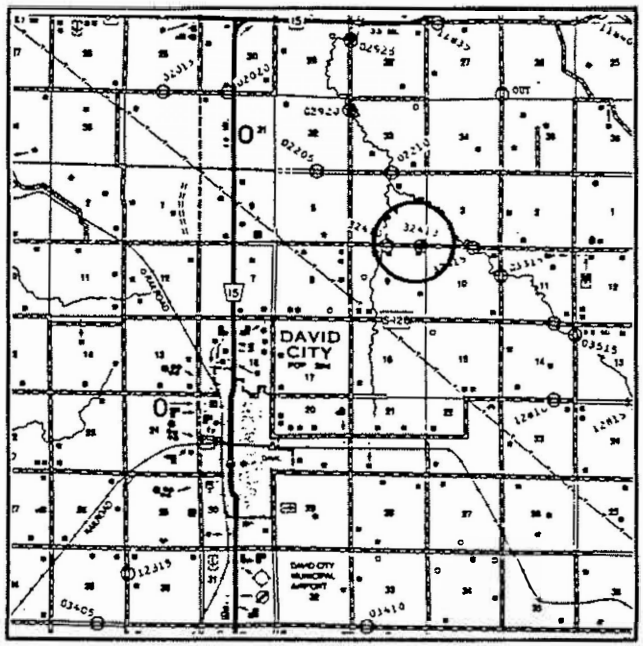
superstructure: steel, 3-panel, pin-connected Pratt half-hip pony truss
substructure: steel I-beam piles with sheet piling back- and wingwalls
floor/decking: timber deck over I-beam stringers
other features: upper chord: 2 channels with cover and batten plates; lower chord: 2 looped eyebars; vertical: 2 pair angles with lacing; diagonal: punched eyebars at hip, eyerods at middle; lateral bracing: round rod with threaded ends; floor beam: I-beam; guardrails: 1 channel (not original); endpost-mounted builder's plate: **Built by C.G. Sheely, Lincoln, Neb., 1904.**

This bridge carries a gravel-surfaced county road across an unnamed stream four miles northeast of David City in north-central Butler County. The structure is comprised of a three-panel, pinned Pratt half-hip pony truss, supported by steel piles with timber back- and wingwalls. As indicated by a plate on the bridge itself, this small-scale structure was erected in 1904 by bridge contractor Charles G. Sheely (who maintained offices in Lincoln and Denver). Sheely held Butler County's annual bridge construction contract that year. Steel channels have been welded inside the verticals on the bridge's north side, but its physical integrity appears otherwise intact.

Born in 1868, Charles G. Sheely had formed a construction company in Denver, apparently just prior to the turn of the century. He subsequently engaged in bridge building and other construction projects in Colorado, Nebraska and elsewhere during the next three decades. Sheely died of appendicitis in San Antonio, Texas in 1934, and is buried in Fort Collins, Colorado. Built by Sheely in 1904, this small bridge is a typical example of an exceedingly common structural type.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001232413; builder's plate on bridge; Proceedings of the Butler County Board of Supervisors, 9 February 1904, located at the Butler County Courthouse, David City, Nebraska; "Charles G. Sheely, Contractor, Dies," [obituary] **Denver Post**, 18 December 1934, p. 8.; field inspection by Lon Johnson, 18 July 1989.

INVENTORIED BY	AFFILIATION	DATE
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C001300305

CASS01

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over stream; S31/32, T10N, R9E
2.1 miles south of Eagle; Cass County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 19)

CONDITION
fair

OWNER
Cass County

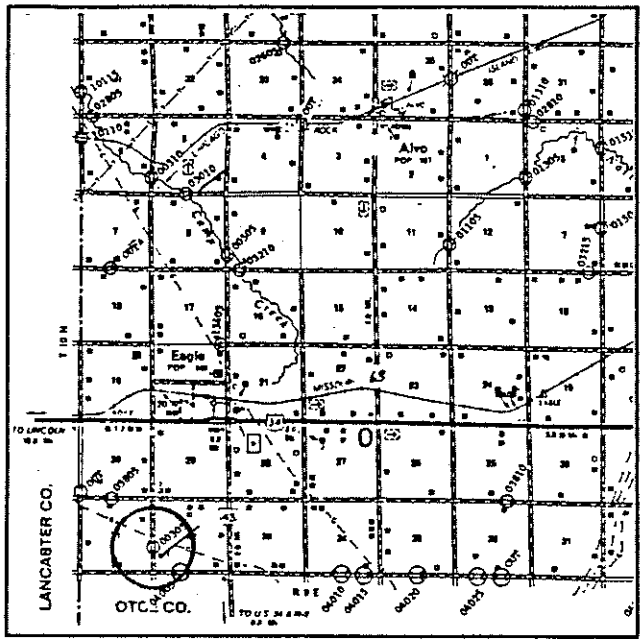
span number:	1	superstructure:	steel, 2-panel, pin-connected Pratt half-hip pony truss
span length:	30.0'	substructure:	steel piling encased in concrete with timber wingwall extensions
total length:	30.0'	floor/decking:	gravel covered concrete over steel stringers
roadway wdt.:	15.7'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 rectangular looped eyebars; vertical: 4 angles with lacing; diagonal: 2 square looped eyebars; floor beam: I-beam, field-bolted to vertical; guardrail: 2 angles

Located approximately two miles south of Eagle, this small-scale pony truss carries a gravel-surfaced road over an intermittent stream. The truss's dimensions and detailing, with the concrete-cased steel pile substructure, suggest an erection date around 1910, a time in which the Cass County Commissioners were issuing annual contracts to the Nebraska Construction Company of Lincoln, Nebraska.

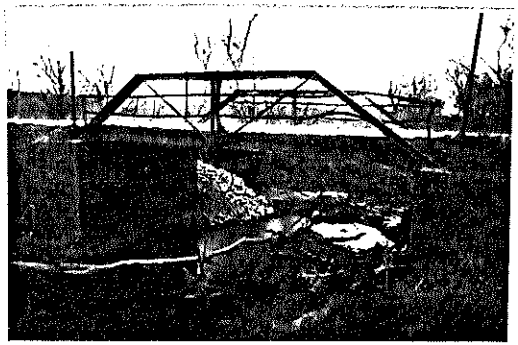
Carrying a secondary county road over a small stream, this small-scale structure displays typical configuration and detailing. It is well-preserved, though historically and technologically undistinguished.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001300305; field inspection by Clayton Fraser and Sheila Bricher-Wade, 15 November 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C001302720

CASS02

DATE(S) OF CONSTRUCTION
ca.1900

LOCATION
county road over stream; S29/30, T11N, R11E
4.1 miles northwest of Weeping Water; Cass County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 35)

CONDITION
fair

OWNER
Cass County

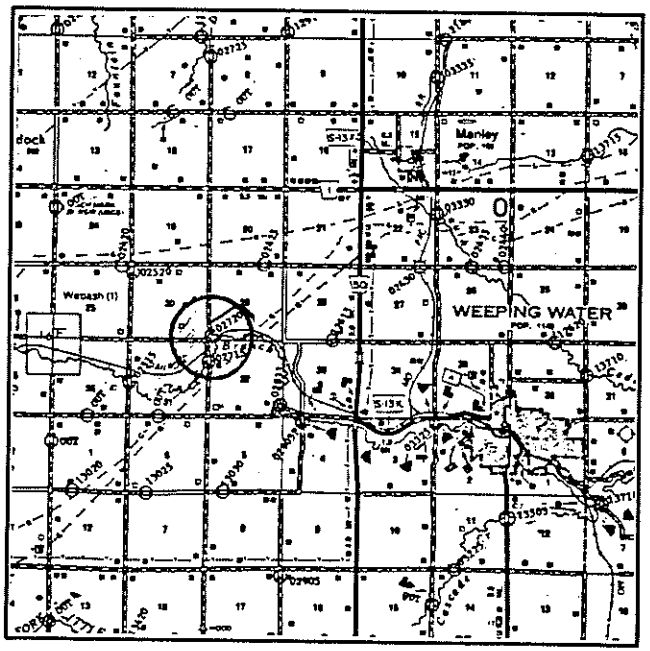
span number:	1	superstructure:	steel, 3-panel, rigid-connected Warren truss leg bedstead
span length:	40.0'	substructure:	truss legs with timber wingwalls
total length:	41.0'	floor/decking:	dirt covered corrugated steel over steel stringers
roadway wdt.:	15.3'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 angles with lacing; vertical: 2 angles with batten plates; diagonal: 2 angles with batten plates; lateral bracing: 2 angles with batten plates; floor beam: I-beam, field-bolted to vertical; guardrail: 2 gas pipes

This riveted bedstead carries a gravel-surfaced county road over a small tributary of Weeping Water Creek in central Cass County. Contemporary county records generally fail to list specific bridges in their discussion of bridge work, making definitive identification of this small structure impossible. Physical evidence on the truss itself suggests an erection date of ca.1900. Lincoln-based J.R. Sheely and Company, which held Cass County's annual contracts between 1894 and 1906, is the most likely contractor.

Though never as popular as the pony truss, the truss leg bedstead was a standard bridge type marketed in the late 19th and early 20th centuries by several midwestern bridge firms. The structure acts as a rigid frame, with its endposts extended below the truss itself to form the supports. This was both the strength and the weakness ofthe bedstead. The combined super- and substructure reduced erection costs somewhat, but they were prey to flood and collision damage and suffered from inherent structural weaknesses relating to compression stress in the lower chords. Between about 1896, when they were first built in Nebraska, and the first decade of the 20th century, a number of bedsteads were built in the state. Through attrition, however, all but a dozen have since been demolished. (Of these, half employ rigid Warren configurations.) One of three such structures remaining intact in Cass County, this bridge is a well-preserved and technologically significant resource. However, its lack of documentation limits its interpretive value.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001302720; Cass County Commissioners' Record, refer to the following entries in Book 6: 8 March 1894 (page 309), 2 April 1895 (page 375), 16 February 1897 (page 501), 4 January 1898 (page 560), 3 January 1899 (page 2) and the following entries in Book 7: 3 January 1899 (page 2), 5 December 1899 (page 70), 4 December 1900 (page 145), 3 December 1901 (page 214), located at Cass County Courthouse, Plattsmouth, Nebraska; field inspection by Clayton Fraser and Sheila Bricher-Wade, 15 November 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
South Cedar Creek Bridge
NDOR: C001304115

CASS03

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over South Cedar Creek; S4/5, T10N,R12E
3.1 miles east of Weeping Water; Cass County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 13)

CONDITION
fair/poor

OWNER
Cass County

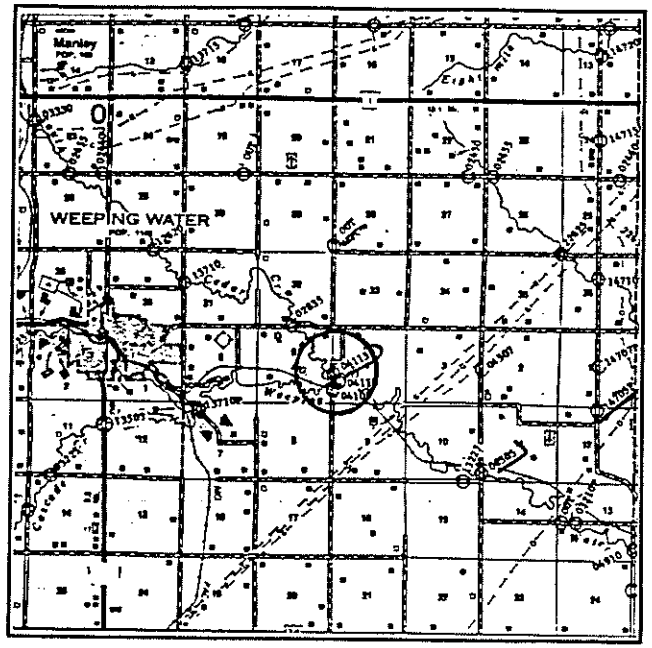
span number:	1	superstructure:	steel, 3-panel, pin-connected half-hip Pratt pony truss
span length:	45.0'	substructure:	steel pile bent abutments with timber wingwalls
total length:	46.0'	floor/decking:	earth-covered corrugated steel over steel stringers
roadway wdt.:	16.0'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 punched rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 punched rectangular eyebars, single round bar with turnbuckle; lateral bracing: round bar with threaded ends; floor beam: I-beam, field bolted to vertical; guardrail: steel pipe

Located approximately three miles east of Weeping Water, this small-scale pony truss carries a gravel-surfaced road over South Cadar Creek. The truss's dimensions and detailing suggest an erection date of 1910, a time in which the Cass County Commissioners were issuing annual contracts to the Nebraska Construction Company of Lincoln, Nebraska. The bridge is situated on a tightly curved alignment and, resultingly, has been hit by vehicles at least once, bending and skewing the endposts, verticals and upper chord.

With typical configuration and detailing, poor physical integrity and a lack of archival documentation, this small-scale pony truss appears to lack any degree of significance.

NAME(S) OF STRUCTURE
South Cedar Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001304115; field inspection by Clayton Fraser and Sheila Bricher-Wade, 15 November 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Weeping Water Creek Bridge
NDOR: C001304505

CASS04

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
county road over Weeping Water Creek; S10/11, T10N, R12E
2.9 miles northwest of Nehawka City; Cass County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 19)

CONDITION
good

OWNER
Cass County

span number:	1	superstructure:	steel, 7-panel, pin-connected Pratt through truss
span length:	120.0'	substructure:	steel pile bents with timber wingwalls
total length:	122.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	15.6'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 punched rectangular eyebars; vertical: 2 channels with lacing; diagonal: 2 punched rectangular eyebars, 1 round eyebar with turnbuckle; lateral bracing: round bar with threaded ends; strut: 2 angles; portal strut: A-frame; floor beam: I-beam, field-bolted to vertical; guardrail: two channels

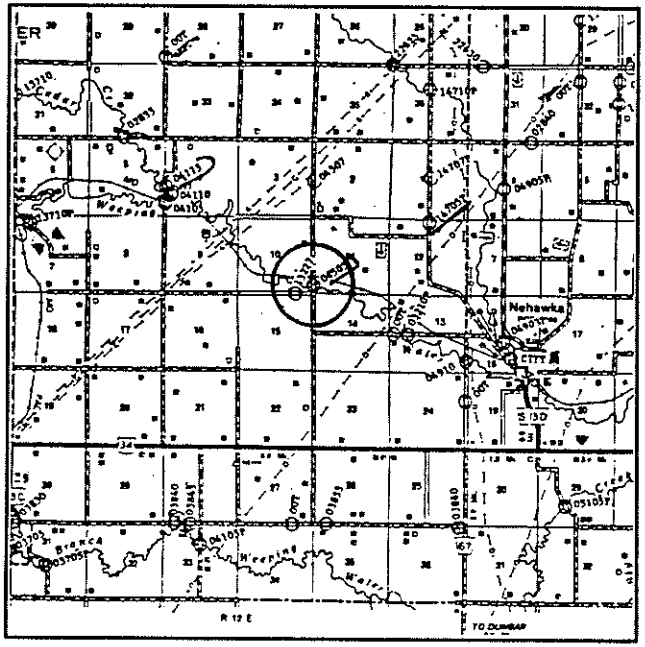
This pin-connected Pratt through truss carries a gravel-surfaced county road over Weeping Water Creek three miles northwest of Nehawka City. No specific reference to the bridge was found in County Commissioners' records, and there was no builder's plate. Consequently, information such as the date of construction, and the name of the contractor cannot be firmly documented. Rather, it has been gleaned by evaluating the structure's configuration and materials, and from a knowledge of regional bridge building trends. These factors indicate an erection date circa 1915, however, the bridge does not appear to be in its original location. Moreover, the structure was most likely built by the Monarch Engineering Company of Falls City, Nebraska, the firm which held Cass County's annual bridge building contract each year from 1913 to 1920. A new steel pile bent substructure indicates that either the truss has been moved to this location or the original substructure has been replaced.

The Weeping Water Creek Bridge is a typical example of a common structural type, built relatively late in the milieu of pin-connected truss construction and possibly moved here at a later date. Without documentation, the interpretive value of this bridge is limited.

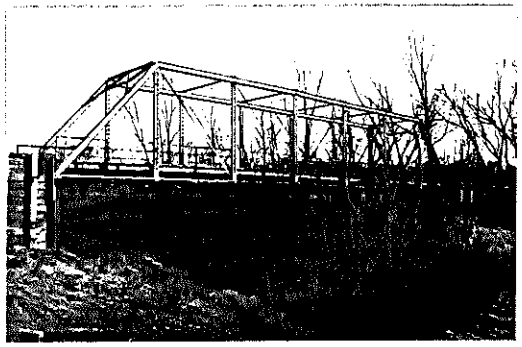
NAME(S) OF STRUCTURE

Weeping Water Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001304505; field inspection by Clayton Fraser and Sheila Bricher-Wade, 15 November 1989.

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Turkey Creek Bridge
NDOR: C001310805

CASS05

DATE(S) OF CONSTRUCTION
ca.1900

LOCATION
county road over Turkey Creek; S9/16, T12N, R12E
5.1 miles northeast of Louisville; Cass County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 35)

CONDITION
fair

OWNER
Cass County

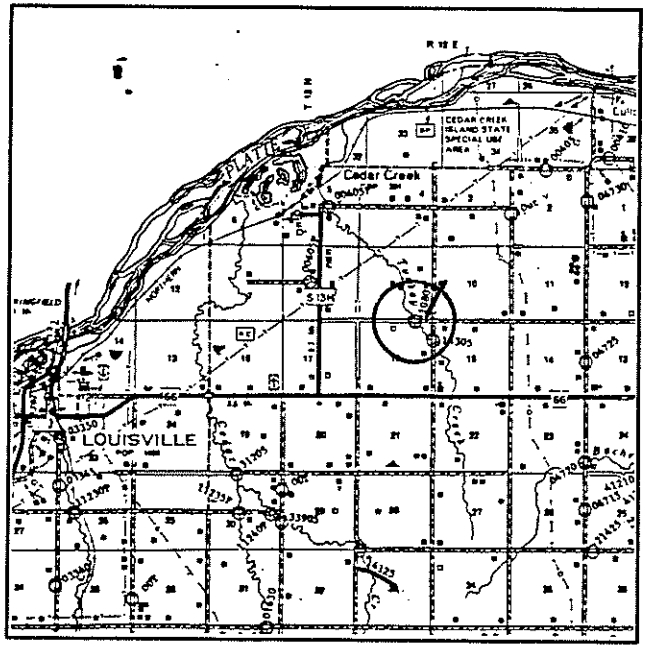
span number:	1	superstructure:	steel, 3-panel, rigid-connected Warren truss leg bedstead
span length:	40.0'	substructure:	steel pile bents with timber wingwalls
total length:	41.0'	floor/decking:	earth covered corrugated steel over steel stringers
roadway wdt.:	14.8'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 angles with batten plates; vertical: 2 angles with batten plates; diagonal: 2 angles with batten plates; floor beam: I-beam (new) field-bolted to vertical; guardrail: 2 gas pipes

This riveted bedstead carries a gravel-surfaced county road over a small tributary of Weeping Water Creek in central Cass County. Contemporary county records generally fail to list specific bridges in their discussion of bridge work, making definitive identification of this small structure impossible. Physical evidence on the truss itself suggests an erection date ca.1900. Lincoln-based J.R. Sheely and Company, which held Cass County's annual contracts between 1894 and 1906, is the most likely contractor.

Though never as popular as the pony truss, the truss leg bedstead was a standard bridge type marketed in the late 19th and early 20th centuries by several midwestern bridge firms. The structure acts as a rigid frame, with its endposts extended below the truss itself to form the supports. This was both the strength and the weakness ofthe bedstead. The combined super- and substructure reduced erection costs somewhat, but they were prey to flood and collision damage and suffered from inherent structural weaknesses relating to compression stress in the lower chords. Between about 1896, when they were first built in Nebraska, and the first decade of the 20th century, a number of bedsteads were built in the state. Through attrition, however, all but a dozen have since been demolished. (Of these, half employ rigid Warren configurations.) One of three such structures remaining intact in Cass County, this bridge is a well-preserved and technologically significant resource. However, its lack of documentation limits its interpretive value.

NAME(S) OF STRUCTURE
Turkey Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001310805; Cass County Commissioners' Record, refer to the following entries in Book 6: 8 March 1894 (page 309), 2 April 1895 (page 375), 16 February 1897 (page 501), 4 January 1898 (page 560), 3 January 1899 (page 2) and the following entries in Book 7: 3 January 1899 (page 2), 5 December 1899 (page 70), 4 December 1900 (page 145), 3 December 1901 (page 214), located at Cass County Courthouse, Plattsmouth, Nebraska; field inspection by Clayton Fraser and Sheila Bricher-Wade, 15 November 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C001314125

CASS06

DATE(S) OF CONSTRUCTION
ca.1900

LOCATION
county road over stream; S28/33, T12N, R12E
4.7 miles southeast of Louisville; Cass County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING 40 (score:)

CONDITION
fair

OWNER
Cass County

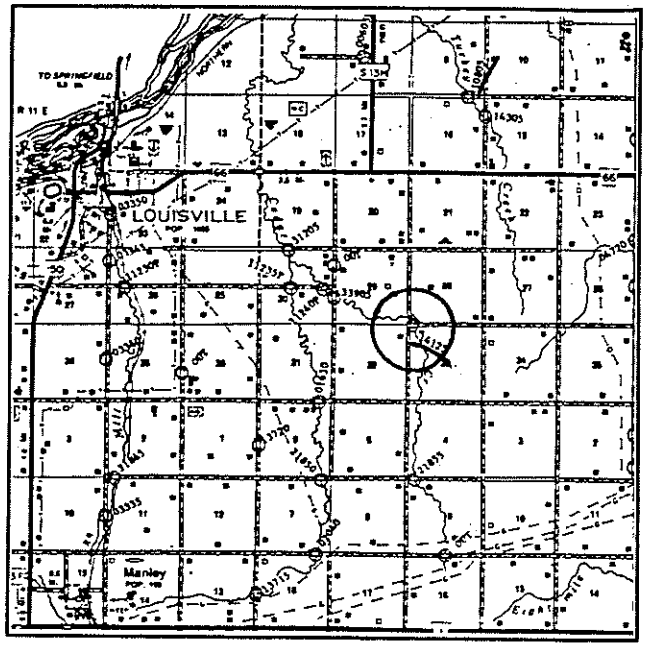
span number:	1	superstructure:	steel, 4-panel, rigid-connected Warren truss leg bedstead
span length:	50.0'	substructure:	truss legs with concrete backwalls
total length:	51.0'	floor/decking:	gravel-covered corrugated steel over steel stringers
roadway wdt.:	15.0'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 angles with batten plates; vertical: 2 angles with batten plates; diagonal: 2 angles with batten plates; floor beam: I-beam, field-bolted to vertical; guardrail: 2 gas pipes

This riveted bedstead carries a gravel-surfaced county road over a small tributary of Weeping Water Creek in central Cass County. Contemporary county records generally fail to list specific bridges in their discussion of bridge work, making definitive identification of this small structure impossible. Physical evidence on the truss itself suggests an erection date around 1900. Lincoln-based J.R. Sheely and Company, which held Cass County's annual contracts between 1894 and 1906, is the most likely contractor.

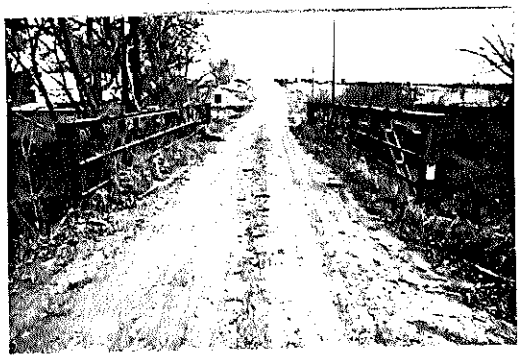
Though never as popular as the pony truss, the truss leg bedstead was a standard bridge type marketed in the late 19th and early 20th centuries by several midwestern bridge firms. The structure acts as a rigid frame, with its endposts extended below the truss itself to form the supports. This was both the strength and the weakness ofthe bedstead. The combined super- and substructure reduced erection costs somewhat, but they were prey to flood and collision damage and suffered from inherent structural weaknesses relating to compression stress in the lower chords. Between about 1896, when they were first built in Nebraska, and the first decade of the 20th century, a number of bedsteads were built in the state. Through attrition, however, all but a dozen have since been demolished. (Of these, half employ rigid Warren configurations.) One of three such structures remaining intact in Cass County, this bridge is a well-preserved and technologically significant resource: the longest example in the state of its structural type. However, its lack of documentation limits its interpretive value.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001314125; Cass County Commissioners' Record, refer to the following entries in Book 6: 8 March 1894 (page 309), 2 April 1895 (page 375), 16 February 1897 (page 501), 4 January 1898 (page 560), 3 January 1899 (page 2) and the following entries in Book 7: 3 January 1899 (page 2), 5 December 1899 (page 70), 4 December 1900 (page 145), 3 December 1901 (page 214), located at Cass County Courthouse, Plattsmouth, Nebraska; field inspection by Clayton Fraser and Sheila Bricher-Wade, 15 November 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C001314705P

CASS07

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over stream; S12, T10N, R12E
2.1 miles northwest of Nehawka City; Cass County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 15)

CONDITION
fair

OWNER
Cass County

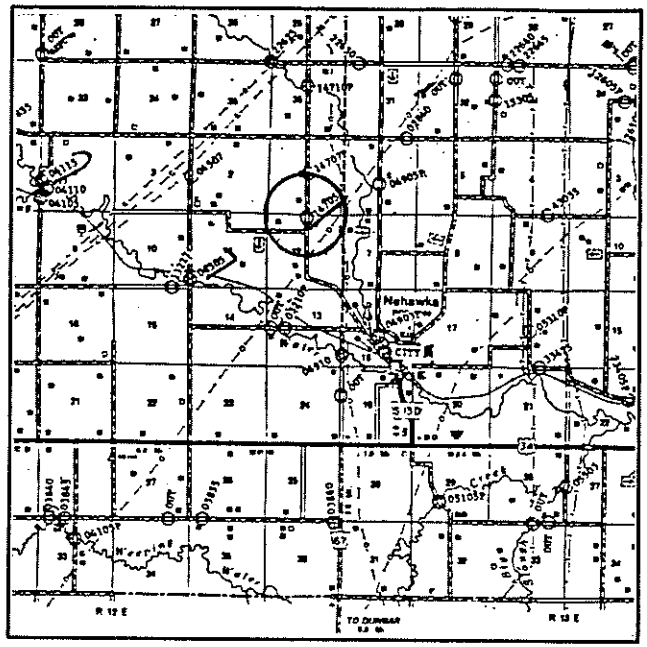
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt half-hip pony truss with steel stringer approach spans
span length:	50.0'	substructure:	steel pile bents with timber wingwalls, concrete-filled steel cylinder piers
total length:	77.0'	floor/decking:	gravel-covered corrugated steel with steel stringers
roadway wdt.:	15.8'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 punched rectangular eyebars; vertical: 4 angles with batten plates; diagonal: 2 looped square eyebars; lateral bracing: round bar with threaded ends; floor beam: I-beam, field-bolted to vertical; guardrail: 2 angles

Located approximately two miles northwest of Nehawka City, this small-scale pony truss carries a gravel-surfaced road over an intermittent stream. The truss's dimensions and detailing, with the concrete-cased steel pile substructure, suggest an erection date around 1910, a time in which the Cass County Commissioners were issuing annual contracts to the Nebraska Construction Company of Lincoln, Nebraska.

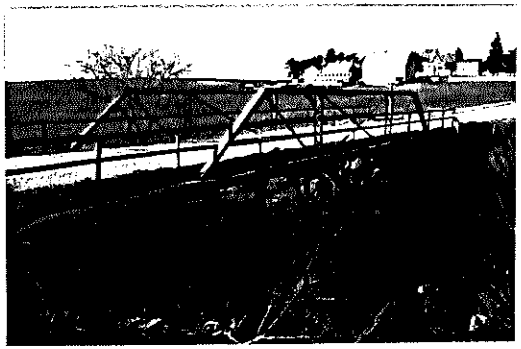
With typical configuration and detailing, this small-scale pony truss is historically and technologically undistinguished.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001314705P; field inspection by Clayton Fraser and Sheila Bricher-Wade, 15 November 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Plattsmouth Bridge
NDOR: S034 38208

CASS08

DATE(S) OF CONSTRUCTION
1929

LOCATION
U.S. Highway 34 over the Missouri River; S18, T12N, R14E
east edge of Plattsmouth; Cass County, Nebraska

USE (ORIGINAL / CURRENT)
highway bridge / highway bridge

RATING NRHP eligible (score: 66)

CONDITION
excellent

OWNER
Plattsmouth Bridge Company

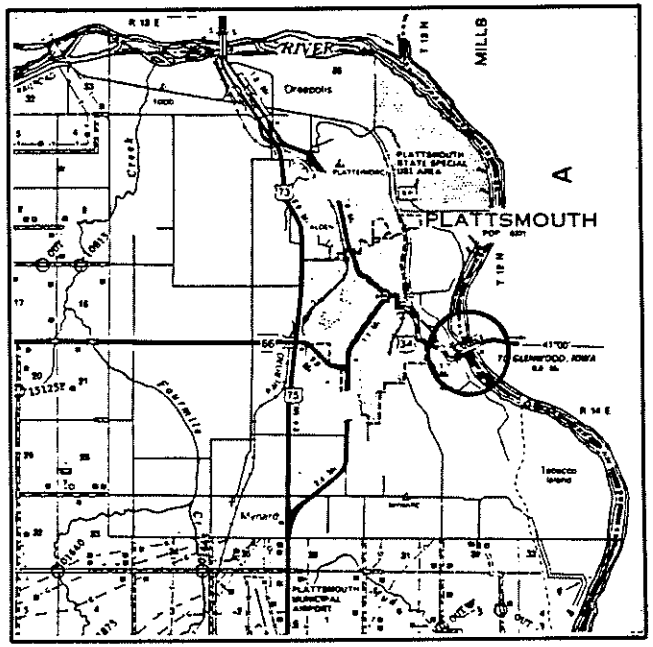
span number:	2	superstructure:	steel, rigid-connected cantilever through truss
span length:	400.0'	substructure:	concrete abutments and piers with architectural detailing
total length:	1820.0'	floor/decking:	concrete over steel stringers
roadway wdt.:	20.0'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 channels with lacing; vertical: 2 channels with lacing, 4 angles with continuous plate; diagonal: 2 channels with lacing; lateral bracing: 4 angles with lacing; strut: 4 angles with lacing, braced; floor beam: I-beam, field-bolted to vertical; guardrail: steel screen mesh

The Plattsmouth Bridge carries U.S. Highway 34 over the Missouri River between Cass County, Nebraska, and Mills County, Iowa. Located immediately downriver from George Morison's 1880 railroad bridge, the immense structure consists of seven spans: a 402-foot cantilevered through truss over the river's navigable channel, anchored by flanking 201-foot through spans, with two 203-foot and two 104-foot deck trusses on the eastern flood plain. The bridge was constructed in 1929 as a toll structure for the Plattsmouth Bridge Company, a privately held corporation. (Tolls are collected on the bridge presently by the company.) The bridge was designed, fabricated and erected by the Omaha Structural Steel Works, with a total construction cost was reported as $639,361. With its sharp angularity and somewhat graceless profile, the Plattsmouth Bridge resembles some of the 19th century pin-connected trusses over the Missouri River. But its riveted connections and modestly Moderne channel piers indicate the relatively late construction date. The bridge's 20-foot roadway width places it among the narrowest of the extant vehicular trusses over the Missouri River. Since its completion in December 1929, the Plattsmouth Bridge has carried relatively heavy traffic on this strategically important interstate route.

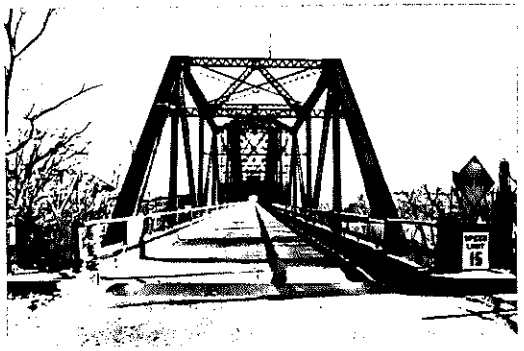
The Plattsmouth Bridge is distinguished as one of the oldest extant Missouri River bridge into Nebraska, exceeded in age by only the Abraham Lincoln Bridge (**WASH06**) and the Meridian Bridge (**CEDA23**). It is technologically significant as a noteworthy example of cantilevered truss construction: one of three such trusses over the Missouri into the state (the others: the South Omaha Bridge (**DOUG13**) and the Brownville Bridge (**NEMA17**)). The Plattsmouth Bridge is historically significant as a nationally important vehicular crossing of the Missouri River. It is also significant for its representation of the toll bridge industry, which built many of the country's largest vehicular spans in the 1920s and 1930s.

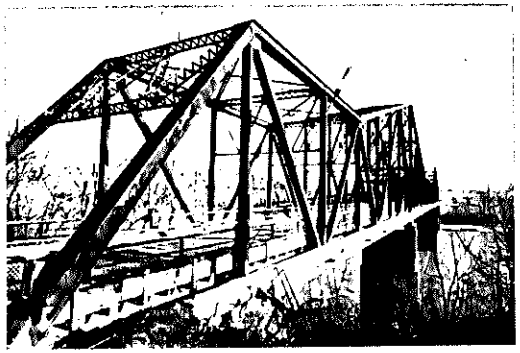
NAME(S) OF STRUCTURE
Plattsmouth Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number S034 38208; Harold Levinger, "Omaha Steel," **Nebraska Blue Print**, October 1949; H.G. Schlitt, "Missouri River Bridges Progress Report," typewritten report dated 20 September 1945, located at Nebraska Department of Roads, Lincoln, Nebraska; field inspection by Clayton B. Fraser and Sheila Bricher-Wade, 15 November 1989.

INVENTORIED BY	**AFFILIATION**	**DATE**
Clayton B. Fraser and Sheila Bricher-Wade	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bow Creek Bridge
NDOR: C001402410P

CEDA01

DATE(S) OF CONSTRUCTION
ca.1925

LOCATION
county road over Bow Creek; S12, T31N, R2E
4 miles south, 1 mile east of Wynot; Cedar County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 22)

CONDITION
good

OWNER
Cedar County

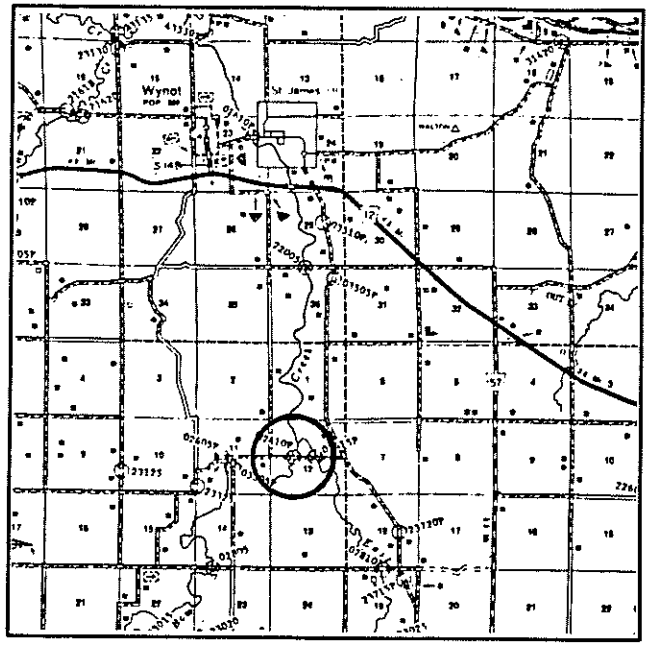
span number:	1	superstructure:	steel, 5-panel, riveted Pratt pony truss, with steel stringer approach spans
span length:	100.0'	substructure:	steel pile abutments with timber back- and wingwalls; open steel pile bent piers
total length:	168.0'	floor/decking:	double-layer timber deck over I-beam stringers
roadway wdt.:	16.3'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: back-to-back channels with top and bottom battens; vertical: 4 angles tied with battens; diagonal: 2 angles tied with battens; bracing: through deck; floor beams: I-beams; bottom laterals: round tie rods with turnbuckles; floor beams: I-beams railing: 2 channels

This bridge carries a county road over Bow Creek just upstream from the creek's intersection with East Bow Creek. The road and bridge are on an east-west orientation. The bridge is very similar to the East Bow Creek Bridge (**CEDA02**), about one-quarter mile to the east. County records do not reveal when either structure was erected. The design is similar to standard state plans for riveted pony trusses available in the 1920s.

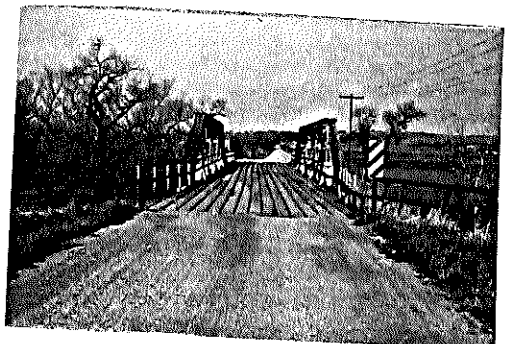
This bridge is a typical pony truss, designed from state standard plans and dating from the mid-1920s.

NAME(S) OF STRUCTURE
Bow Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001402410P; field inspection by Charlene K. Roise, 21 April 1990.

INVENTORIED BY
Charlene K. Roise

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
East Bow Creek Bridge
NDOR: C001402415P

CEDA02

DATE(S) OF CONSTRUCTION
ca.1925

LOCATION
county road over East Bow Creek; S12, T31N, R2E
4 miles south, 1.2 miles east of Wynot; Cedar County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 22)

CONDITION
good

OWNER
Cedar County

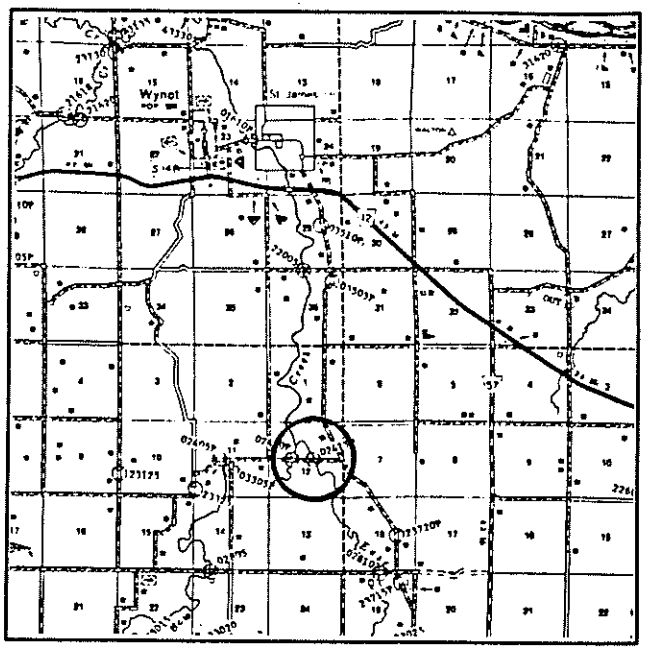
span number:	1	superstructure:	steel, 5-panel, rigid-connected Pratt pony truss, with timber stringer approach span
span length:	100.0'	substructure:	steel pile abutments with timber/steel back- and wingwalls; open steel pile bent pier
total length:	132.0'	floor/decking:	main span: timber deck over steel/timber stringers
roadway wdt.:	15.8'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: back-to-back channels with top and bottom battens; vertical: 4 angles tied with battens; diagonal: 2 angles tied with battens; bracing: through deck; floor beams: I-beams; bottom laterals: round tie rods with turnbuckles; floor beams: I-beams railing: 2 channels

This bridge carries a county road over East Bow Creek just upstream from the creek's intersection with Bow Creek. The road and bridge are on an east-west orientation. The bridge is very similar to the Bow Creek Bridge (CEDA01), about one-quarter mile to the west. County records do not reveal when either bridge was constructed. The design is similar to standard state plans for riveted pony trusses available in the 1920s.

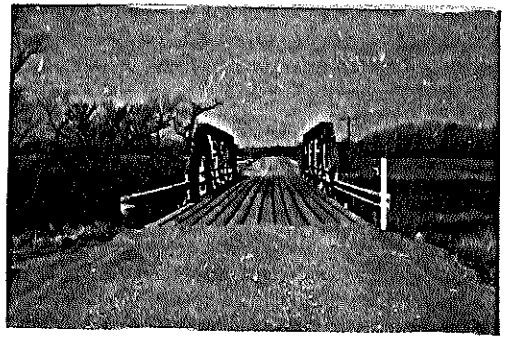
This bridge is a typical pony truss, designed from state standard plans and dating from the mid-1920s.

NAME(S) OF STRUCTURE
East Bow Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001402415P; field inspection by Charlene K. Roise, 21 April 1990.

INVENTORIED BY
Charlene K. Roise

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bow Creek Bridge
NDOR: C001402805

CEDA03

DATE(S) OF CONSTRUCTION
ca.1935

LOCATION
county highway over Bow Creek; S14/23, T31N, R2E
5.5 miles south of Wynot; Cedar County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 33)

CONDITION
very good

OWNER
Cedar County

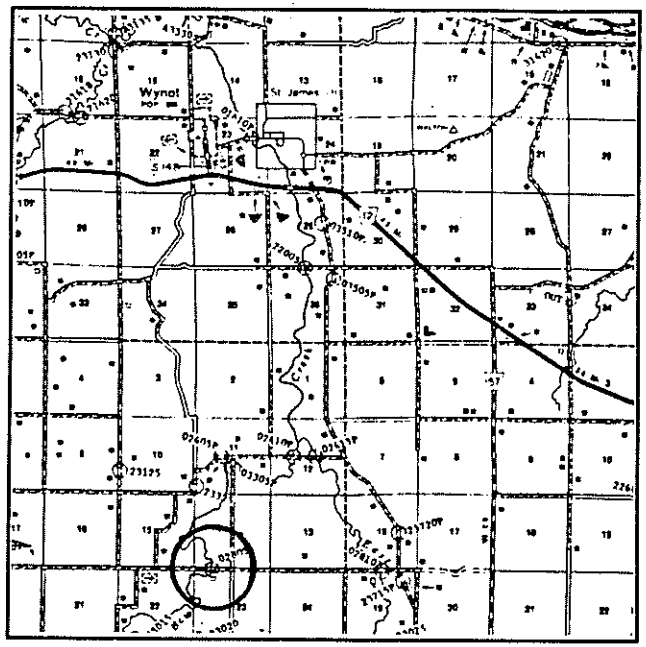
span number:	1	superstructure:	steel, 5-panel, rigid-connected Camelback pony truss
span length:	100.0'	substructure:	steel pile abutments with corrugated metal back- and wingwalls
total length:	102.0'	floor/decking:	concrete deck over steel stringers
roadway wdt.:	24.6'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: back-to-back channels tied with battens; vertical: I-beams; diagonal: I-beams; floor beams: I-beams bolted to superstructure; bottom lateral: angle irons; railings: I-beams which terminate in a streamlined curve

This bridge runs east-west over Bow Creek. It is very similar in design to **CEDA06, CEDA07, CEDA13** and **CEDA19.** The sturdy elements used in the bridge's construction, the streamline detailing on its railing, and its good state of repair suggest a mid-1930s construction date.

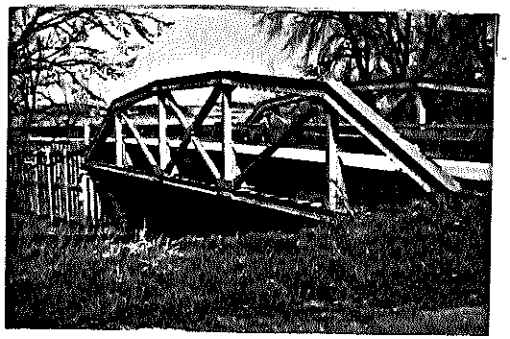
This is a typical Camelback pony truss, probably designed from state standard plans and dating from the mid-1930s. The streamlined curve terminating the railings recalls the Streamline Moderne architecture of the period. It is the best-preserved example of this type, which was used extensively in Cedar County. With a 100-foot span, the bridge also features the longest span for which this design was used.

NAME(S) OF STRUCTURE
Bow Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001402805; field inspection by Charlene K. Roise, 21 April 1990.

INVENTORIED BY
Charlene K. Roise

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Middle Logan Creek Bridge
NDOR: C001403110

CEDA04

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county highway over Middle Logan Creek; S9/10, T28N, R2E
0.5 mile east of Belden; Cedar County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 30)

CONDITION
fair

OWNER
Cedar County

span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt pony truss
span length:	64.0'	substructure:	steel pile abutments with timber back- and wingwalls
total length:	65.0'	floor/decking:	double-layer timber deck over I-beam stringers
roadway wdt.:	14.5'	other features:	upper chord: back-to-back channel beams with cover plate and battens; lower chord: 2 eyebars; vertical: 4 angle irons with lacing; counter: single round rods with turnbuckles; bracing: through deck; floor beams: I-beams; bottom laterals: round rods; railings: 2 angles which extend to right side of each approach; endpost-mounted builder's plates: **Built by the Western Bridge & Construction Co. Omaha. Neb.**

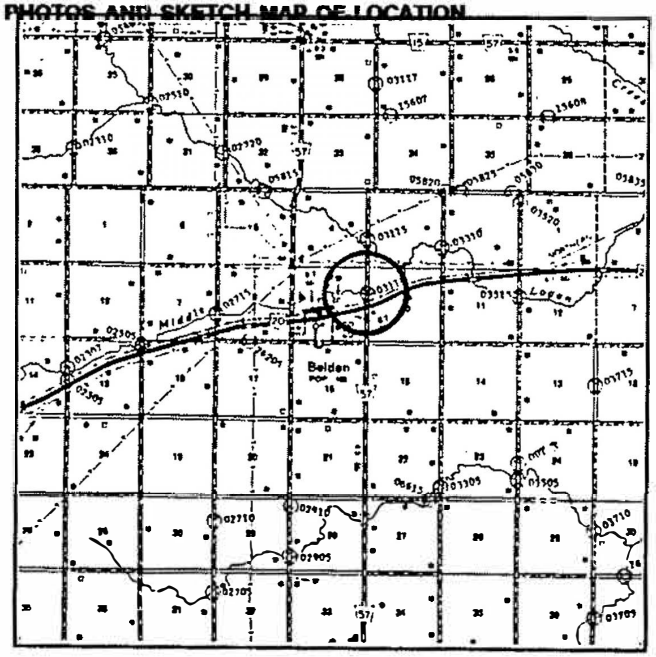
This bridge lies on a north-south road just north of U.S. Highway 20. As indicated by the builder's plates on the bridge itself, it was fabricated by the Western Bridge and Construction Company of Omaha. County records do not specifically refer to the construction of this bridge. Proceedings of the County Commissioners indicate, however, that Western was awarded the annual bridge construction contracts for Cedar County from 1907 to 1911 and in 1913. In 1915, the commissioners decided to construct bridges under their own supervision, and gave Western the contract for providing materials only. Western also supplied materials from 1918 to 1920, and apparently built bridges as well in 1919 and into the 1920s. Given the narrow roadway width, it is likely that the Middle Logan Creek Bridge was built prior to the county's adoption of state standardized plans in 1914, which required roadways at least 16 feet wide.

This structure is similar to many small, pony trusses built in Nebraska around 1910.

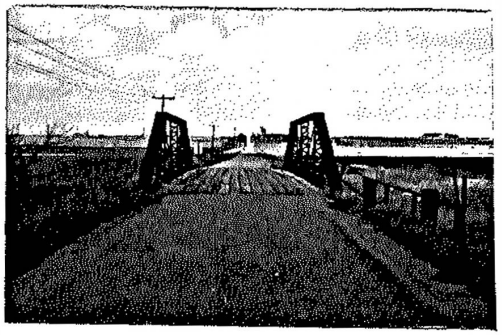
NAME(S) OF STRUCTURE

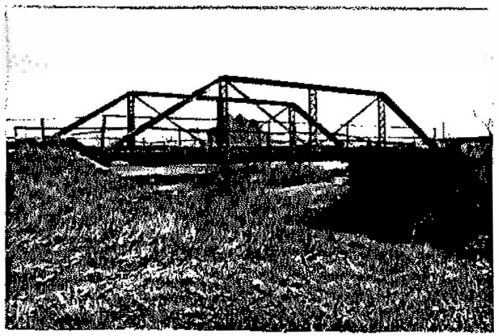
Middle Logan Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001403110; Proceedings of the Cedar County Commissioners, 1888-1926, Cedar County Courthouse, Hartington, Nebraska; field inspection by Charlene K. Roise, 21 April 1990.

INVENTORIED BY	AFFILIATION	DATE
Charlene K. Roise	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C001403120

CEDA05

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county highway over intermittent stream; S9/10, T30N, R2E
3 miles east, 1.5 miles south of Hartington; Cedar County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 34)

CONDITION
fair

OWNER
Cedar County

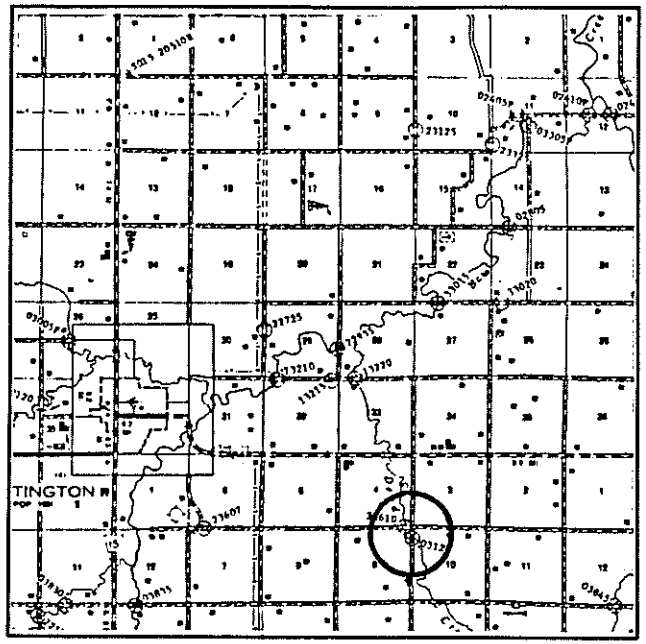
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt pony truss
span length:	40.0'	substructure:	steel pile abutments with timber back- and wingwalls
total length:	40.0'	floor/decking:	double-layer timber deck over I-beam stringers
roadway wdt.:	14.7'	other features:	upper chord: back-to-back channel beams with cover plate and battens; lower chord: 2 eyebars; vertical: 4 angles tied with lacing; counter: 2 round rods with turnbuckles; bracing: through deck; floor beams: I-beams; bottom laterals: round rods; railings: 2 angles which extend to approaches; endpost-mounted builder's plates: **Built by the Western Bridge & Construction Co. Omaha. Neb.**

This bridge lies on a north-south road just north of U.S. Highway 20. As indicated by the builder's plates on the bridge itself, it was fabricated by the Western Bridge and Construction Company of Omaha. County records do not specifically refer to the construction of this bridge. Proceedings of the County Commissioners indicate, however, that Western was awarded the annual bridge construction contracts for Cedar County from 1907 to 1911 and in 1913. In 1915, the commissioners decided to construct bridges under their own supervision, and gave Western the contract for providing materials only. Western also supplied materials from 1918 to 1920, and apparently built bridges as well in 1919 and into the 1920s. Given the narrow roadway width, it is likely that the Middle Logan Creek Bridge was built prior to the county's adoption of state standardized plans in 1914, which required roadways at least 16 feet wide.

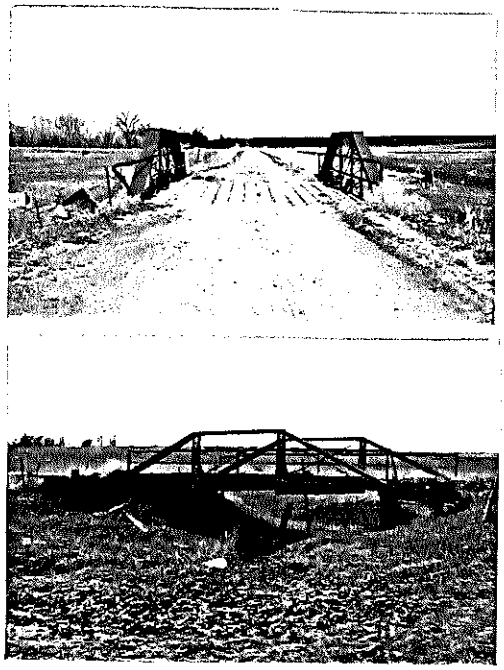
This structure is a typical of many small pony trusses built in Nebraska around 1910.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001403120; Proceedings of the Cedar County Commissioners, 1888-1926, Cedar County Courthouse, Hartington, Nebraska; field inspection by Charlene K. Roise, 21 April 1990.

INVENTORIED BY
Charlene K. Roise

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bow Creek Bridge
NDOR: C001403815

CEDA06

DATE(S) OF CONSTRUCTION
ca.1935

LOCATION
county highway over Bow Creek; S11/14, T30N, R1W
7.5 miles south, 1.5 miles west of Fordyce; Cedar County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 24)

CONDITION
good

OWNER
Cedar County

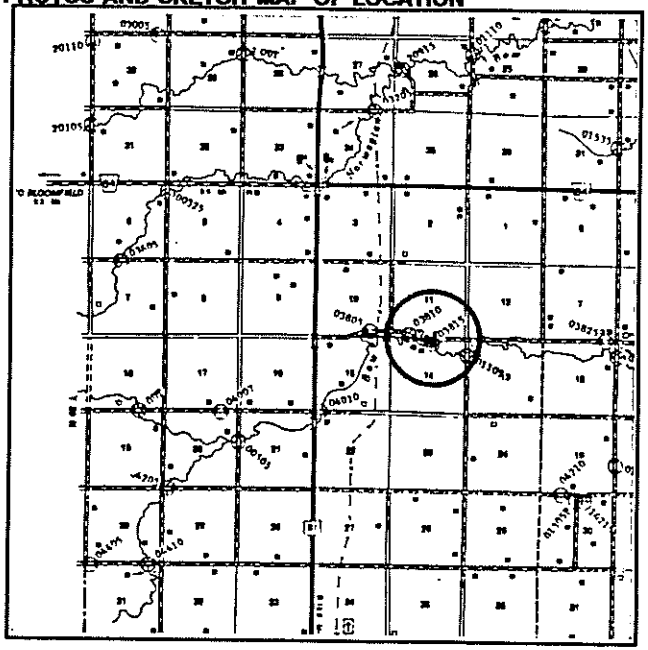
span number:	1	superstructure:	steel, 5-panel, rigid-connected Camelback pony truss
span length:	60.0'	substructure:	steel pile abutments with corrugated metal back- and wingwalls
total length:	62.0'	floor/decking:	concrete deck over steel stringers
roadway wdt.:	25.0'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: back-to-back channels tied with battens; vertical: I-beams; diagonal: I-beams; floor beams: I-beams bolted to superstructure; bottom lateral: angle irons; railings: I-beams which terminate in a streamlined curve

This bridge runs east-west over Bow Creek. It is very similar in design to **CEDA03, CEDA07, CEDA13** and **CEDA19.** The sturdy elements used in the bridge's construction, the streamline detailing on its railing, and its good state of repair suggest a mid-1930s construction date.

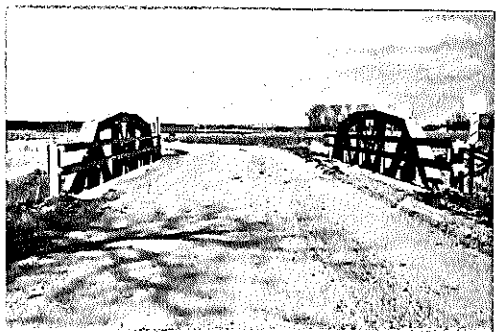
The Bow Creek Bridge is is a typical Camelback pony truss, probably designed from state standard plans and dating from the mid-1930s.

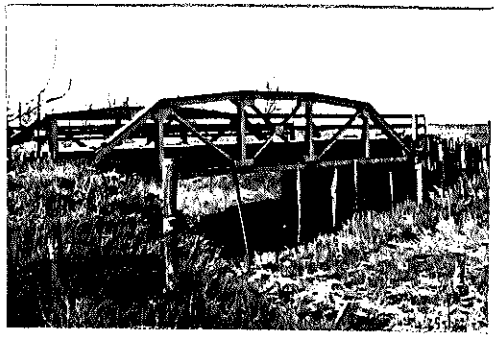
NAME(S) OF STRUCTURE
Bow Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001403815; field inspection by Charlene K. Roise, 21 April 1990.

INVENTORIED BY
Charlene K. Roise

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Pearl Creek Bridge
NDOR: C001403835

CEDA07

DATE(S) OF CONSTRUCTION
ca.1935

LOCATION
county highway over Pearl Creek; S12/23, T30N, R1E
2 miles south of Hartington; Cedar County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 33)

CONDITION
good

OWNER
Cedar County

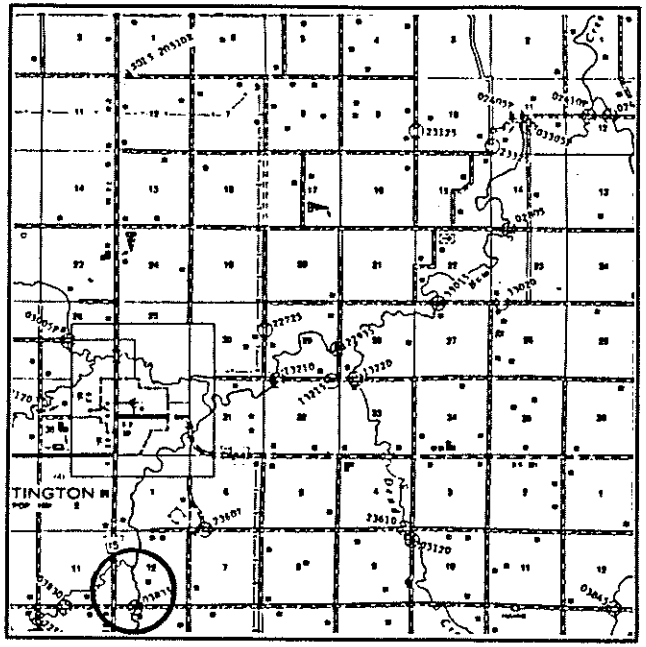
span number:	1	superstructure:	steel, 5-panel, rigid-connected Camelback pony truss
span length:	100.0'	substructure:	steel pile abutments with corrugated metal back- and wingwalls
total length:	102.0'	floor/decking:	concrete deck over steel stringers
roadway wdt.:	24.6'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: back-to-back channels tied with battens; vertical: I-beams; diagonal: I-beams; floor beams: I-beams bolted to superstructure; bottom lateral: angle irons; railings: I-beams which terminate in a streamlined curve

This bridge runs east-west over Pearl Creek. It is very similar in design to **CEDA03, CEDA06, CEDA13** and **CEDA19.** The sturdy elements used in the bridge's construction, the streamline detailing on its railing, and its good state of repair suggest a mid-1930s construction date.

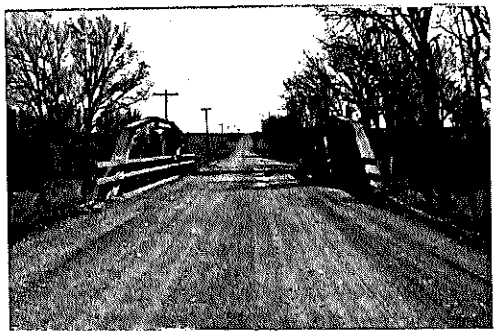
The Pearl Creek Bridge is a typical Camelback pony truss, probably designed from state standard plans and dating from the mid-1930s.

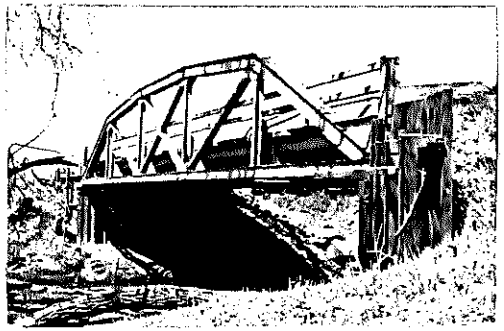
NAME(S) OF STRUCTURE
Pearl Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001403835; field inspection by Charlene K. Roise, 21 April 1990.

INVENTORIED BY
Charlene K. Roise

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C001410505P

CEDA08

DATE(S) OF CONSTRUCTION
ca.1925

LOCATION
county highway over intermittent stream; S28, T33N, R1W
9.5 miles west of Saint Helena; Cedar County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 29)

CONDITION
good

OWNER
Cedar County

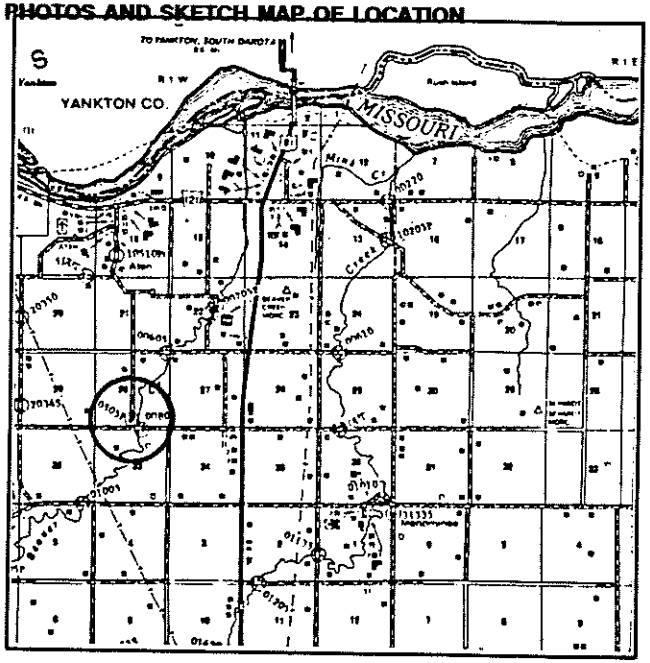
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt pony truss with steel stringer approach span
span length:	44.0'	substructure:	timber wingwalls and abutments; I-beam bents support the approach span
total length:	61.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.9'	other features:	upper chord: back-to-back channel beams with cover plate and battens; lower chord: 2 eyebars; vertical: 4 angles with lacing; counter: round rods with turnbuckles; bottom laterals: round rods; railings: 2 angles; endpost-mounted builder's plates: **Built by the Western Bridge & Construction Co., Omaha, Neb.**

This bridge runs north-south over a small stream. Standard plans from Nebraska's Department of Public Works include a 3-panel, 45-foot span, pin-connected Pratt pony truss with a wood floor which is very similar to this structure. The plan is dated 1926, and a note indicates that it was retraced from a tracing of 1922. Plates on this bridge's northwest and southeast endposts indicate that it was fabricated by the Western Bridge & Construction Company of Omaha, but county records do not specifically refer to the construction of this bridge. Since the county usually built bridges with roadway widths narrower than 16 feet prior to adoption of state standard plans in 1914, this bridge probably dates from a later period. Proceedings of the County Commissioners indicate that the commissioners decided to construct county bridges under their own supervision in 1915, and they gave Western Bridge Company a contract for providing materials only. Western also supplied materials from 1918 to 1920, and apparently built bridges well into the 1920s. It thus appears that this bridge dates from the 1920s.

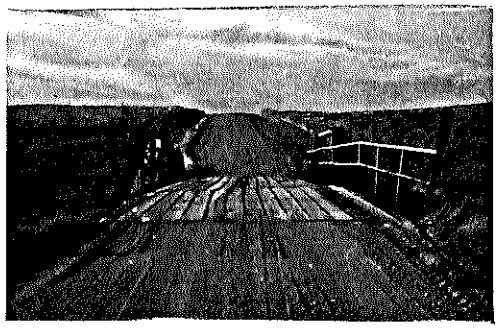
This bridge is typical of pony trusses built in Nebraska during the 1920s.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001410505P; Proceedings of the Cedar County Commissioners, 1888-1926, Cedar County Courthouse, Hartington, Nebraska; "Standard 15-Ton Bridge Plan, 3 Panel-45 Ft. Span-16 Ft. Roadway, Pin-Connected-Wood Floor," 1926, plan number 303, located in Bridge Division, Nebraska Department of Roads; field inspection by Charlene K. Roise, 19 April 1990.

INVENTORIED BY
Charlene K. Roise

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Pearl Creek Bridge
NDOR: C001411313

CEDA09

DATE(S) OF CONSTRUCTION
ca.1913

LOCATION
county highway over Pearl Creek; S6/1, T29N, R1E/1W
5 miles east, 4.3 miles north of Magnet; Cedar County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 31)

CONDITION
good

OWNER
Cedar County

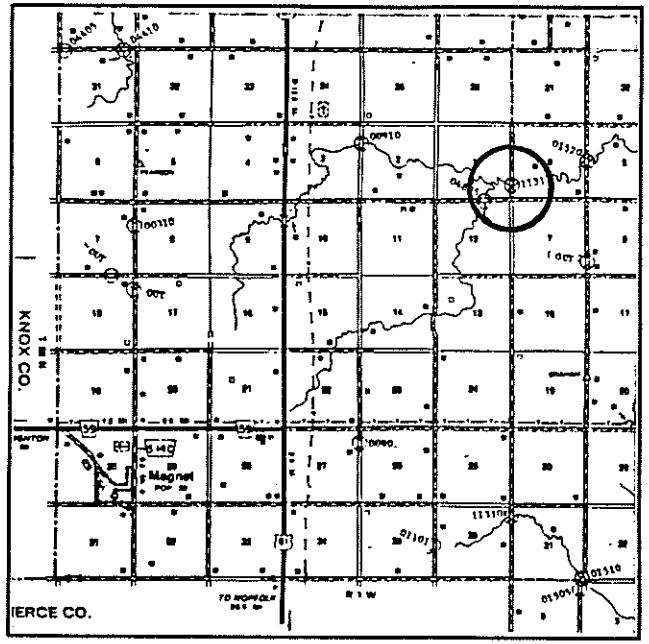
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt pony truss
span length:	50.0'	substructure:	timber wingwalls and abutments
total length:	50.0'	floor/decking:	double-layer timber deck over I-beam stringers
roadway wdt.:	17.3'	other features:	upper chord: back-to-back channel beams with cover plate and battens; lower chord: back-to-back channels connected with a long bolt; vertical: 4 angles with lacing; counter: 2 round rods with turnbuckles; bracing: through deck; floor beams: I-beams; bottom laterals: round rods; railings: 2 angles; endpost-mounted builder's plates: **Built by the Western Bridge & Construction Co. Omaha Neb.**

This bridge runs north-south over Pearl Creek. As indicated by the builder's plates on the bridge itself, this truss was fabricated by the Western Bridge and Construction Company of Omaha. County records do not have any specific reference to the construction of this bridge. Proceedings of the County Commissioners indicate, however, that the Western Bridge Company was awarded the annual bridge construction contract for Cedar County from 1907 to 1911 and in 1913. In 1915, the commissioners decided to construct county bridges under their own supervision, and gave Western the contract for providing materials only. Western also supplied materials from 1918 to 1920, and apparently built bridges as well in 1919 and into the 1920s. No extant standard state bridge plans match the design of the Pearl Creek Bridge, but the structure's relatively wide roadway and other detailing, such as the plate connecting the floor beams to the superstructure, suggest the influence of state plans available in 1913 and adopted by the county in 1914. This bridge thus appears to date from the transitional period around 1913.

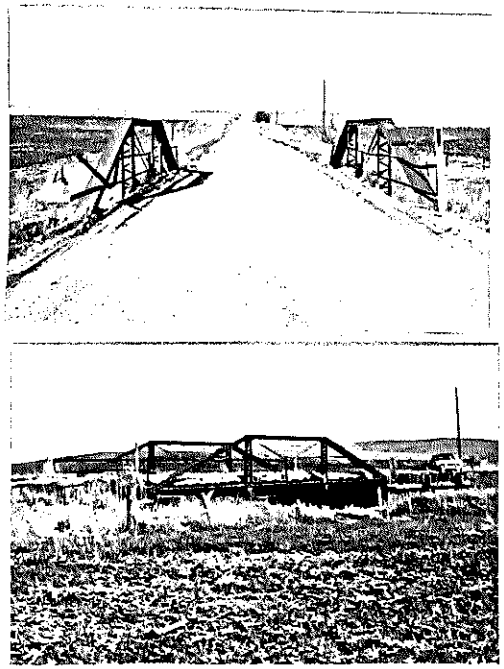
The Pearl Creek Bridge is typical of pony trusses built in Nebraska in the early 20th century just prior to imposition of state standard plans.

NAME(S) OF STRUCTURE
Pearl Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001411313; Proceedings of the Cedar County Commissioners, 1888-1926, Cedar County Courthouse, Hartington, Nebraska; field inspection by Charlene K. Roise, 21 April 1990.

INVENTORIED BY
Charlene K. Roise

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
West Bow Creek Bridge
NDOR: C001411545

CEDA10

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
county highway over West Bow Creek; S31/32, T32N, R1E
0.7 mile northeast of Fordyce; Cedar County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 24)

CONDITION
fair

OWNER
Cedar County

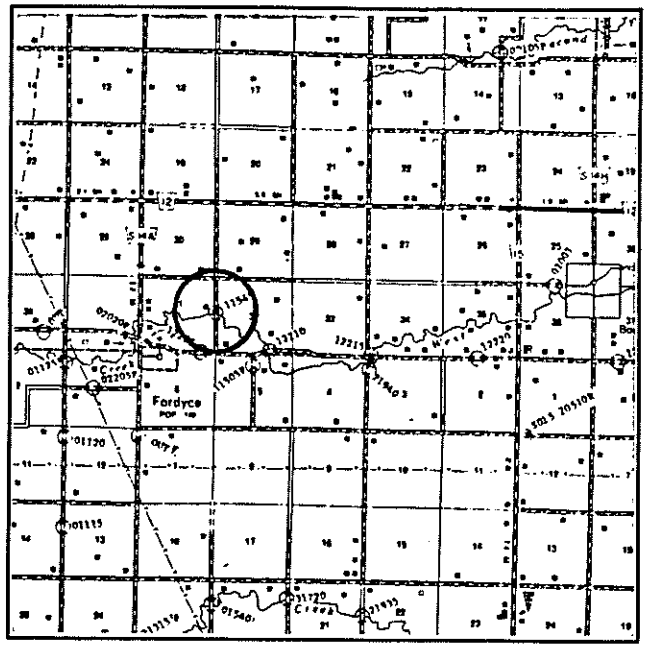
span number:	1	superstructure:	steel, 5-panel, pin-connected Pratt pony truss
span length:	100.0'	substructure:	timber wingwalls and abutments
total length:	102.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.8'	other features:	upper chord: back-to-back channel beams with cover plate and bracing; lower chord: 2 eyebars; vertical: 4 angles; diagonal: 2 punched eyebars; counter: 2 square rods with turnbuckles; bracing: outriggers; floor beams: I-beams; bottom laterals: round rods; railings: 2 channels

This bridge is oriented north-south over West Bow Creek. County records to not specifically refer to the construction of this bridge. The truss, however, appears to match state plan number 320 for a 5-panel, 100-foot, pin-connected Pratt pony truss. The plan was revised in 1922, and probably drawn in 1913. Cedar County adopted state standard plans in 1914. Because the West Bow Creek Bridge does not have any plates indicating who erected it, and because other bridges of the same era often carry plaques from the Western Bridge Company, it appears that the bridge was not the product of Western, which received the county's annual bridge contracts during much of the early decades of the 20th century. It may be that this bridge was built under the supervision of the County Commissioners, who let contracts only for materials, not erection, for several years beginning in 1915. By 1923, the commissioners seem to have gotten out of the bridge erection business. This bridge, therefore, probably dates from 1915 to 1922.

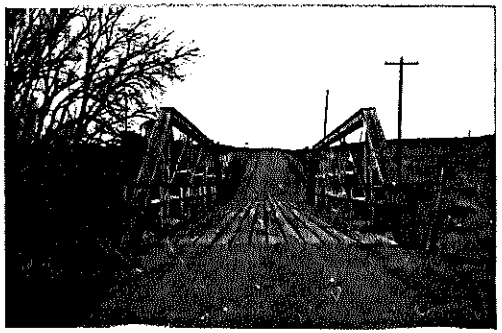
The West Bow Creek Bridge is typical of the Pratt pony trusses built to state standard plans in the mid-to late-1910s and early 1920s.

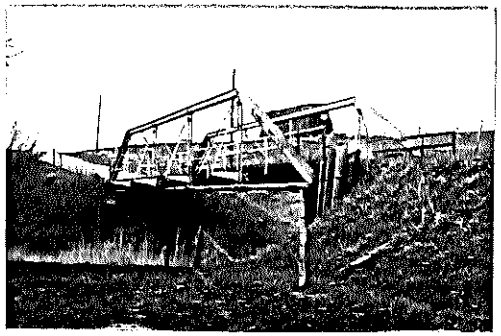
NAME(S) OF STRUCTURE
West Bow Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001411545; Proceedings of the Cedar County Commissioners, 1888-1926, Cedar County Courthouse, Hartington, Nebraska; "5-Panel -- 100 Ft. Span -- 16 Ft. Roadway -- Pin-Connected -- Wood Floor," revised 1922, plan number 320, located in Bridge Division, Nebraska Department of Roads, Lincoln, Nebraska; field inspection by Charlene K. Roise, 19 April 1990.

INVENTORIED BY
Charlene K. Roise

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Ames Creek Bridge
NDOR: C001411615P

CEDA11

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county highway over Ames Creek; S24, T32N, R3E
3.5 miles north of Obert; Cedar County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 31)

CONDITION
fair

OWNER
Cedar County

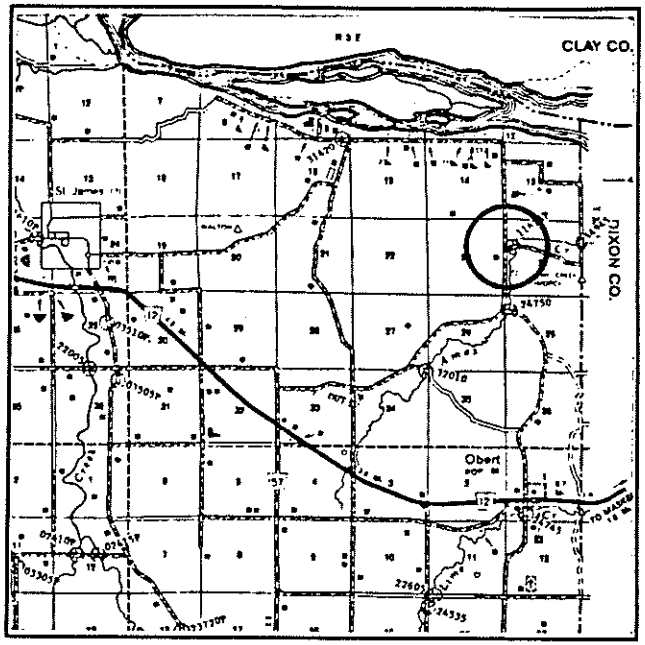
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt pony truss
span length:	50.0'	substructure:	steel pile abutments with timber back- and wingwalls (east) and timber back wall (west)
total length:	50.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	14.5'	other features:	upper chord: back-to-back channel beams with cover plate and battens; lower chord: 2 eyebars; vertical: 4 angles tied with lacing; counter: 2 round rods with turnbuckles; floor beams: I-beams; bottom laterals: round rods; railings: 2 angles which extend to approaches; endpost-mounted builder's plates: **Built by the Western Bridge & Construction Co. Omaha, Neb.**

This bridge runs in a generally east-west direction over Ames Creek. County records do not specifically refer to the construction of this bridge. Proceedings of the County Commissioners indicate, however, that the Western Bridge Company was awarded the annual bridge construction contract for Cedar County from 1907 to 1911 and in 1913. In 1915, the commissioners decided to construct bridges under their own supervision, and gave Western the contract for providing materials only. Western also supplied materials from 1918 to 1920, and apparently built bridges as well in 1919 and into the 1920s. Given the narrow roadway width, it is likely that the Ames Creek Bridge was built prior to the county's adoption of state standardized plans in 1914, which required roadways at least 16 feet wide. It is thus likely that the bridge was built between 1907 and 1913.

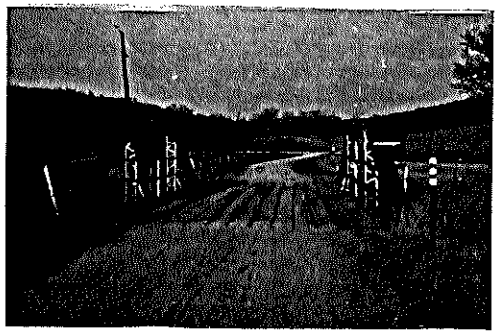
The Ames Creek Bridge is typical of many small pony trusses built in Nebraska around 1910.

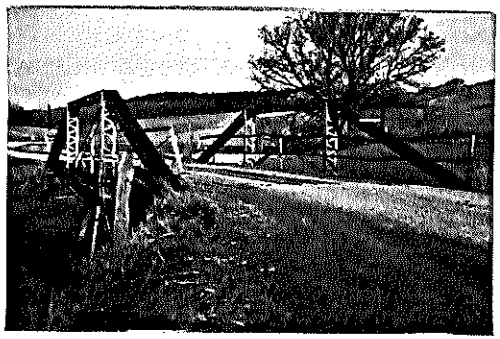
NAME(S) OF STRUCTURE
Ames Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001411615P; Proceedings of the Cedar County Commissioners, 1888-1926, Cedar County Courthouse, Hartington, Nebraska; field inspection by Charlene K. Roise, 21 April 1990.

INVENTORIED BY
Charlene K. Roise

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
West Bow Creek Bridge
NDOR: C001412215

CEDA12

DATE(S) OF CONSTRUCTION
ca.1930

LOCATION
county highway over West Bow Creek; S9/10, T30N, R2E
2.5 miles east of Fordyce; Cedar County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 27)

CONDITION
good

OWNER
Cedar County

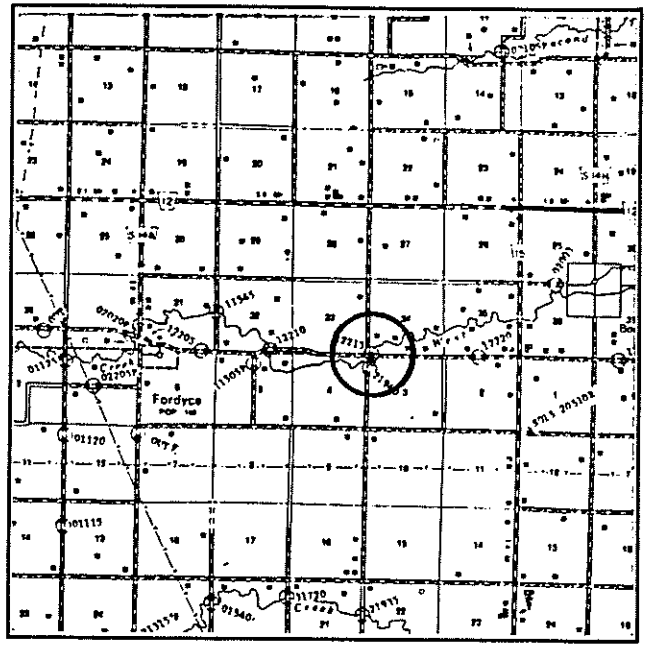
span number:	1	superstructure:	steel, 6-panel, rigid-connected Pratt pony truss
span length:	110.0'	substructure:	steel pile abutments with timber back- and wingwalls
total length:	111.0'	floor/decking:	double-layer timber deck over I-beam stringers
roadway wdt.:	17.0'	other features:	upper chord: back-to-back channel beams with cover plate and double lacing; lower chord: back-to-back channels with battens top and bottom; vertical: built-up I-beam (4 angles with plate); diagonal: 2 angles connected by battens; floor beams: I-beams; bottom laterals: angles; railings: 2 angles

This bridge runs east-west over West Bow Creek. County records do not specifically refer to the construction of this bridge. In the first decades of the 20th century, through trusses were used for spans over 100 feet. Since this pony truss spans 110 feet, it probably dates from the late 1920s or early 1930s. This time period is further substantiated by the bridge's heavy construction and riveted connections.

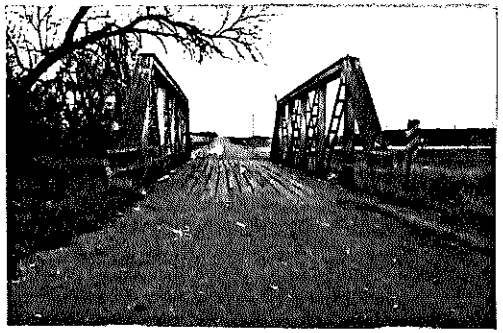
The 110-foot span distinguishes the West Bow Creek Bridge as the longest of its structural type found in Nebraska. It is otherwise typical of the riveted Pratt pony truss bridges being built around 1930.

NAME(S) OF STRUCTURE
West Bow Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001412215; Proceedings of the Cedar County Commissioners, 1888-1926, Cedar County Courthouse, Hartington, Nebraska; field inspection by Charlene K. Roise, 19 April 1990.

INVENTORIED BY
Charlene K. Roise

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bow Creek Bridge
NDOR: C001413215

CEDA13

DATE(S) OF CONSTRUCTION
ca.1935

LOCATION
county highway over Bow Creek; S9/10, T30N, R2E
1.2 miles east of Hartington; Cedar County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 33)

CONDITION
good

OWNER
Cedar County

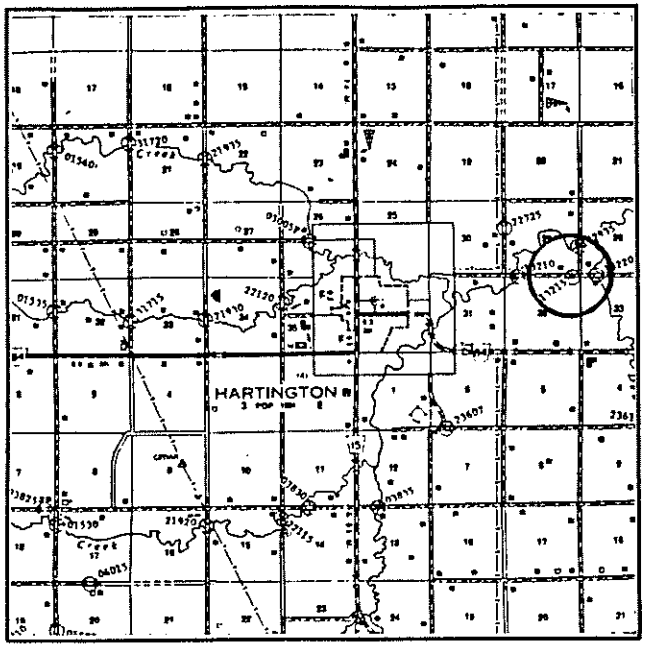
span number:	1	superstructure:	steel, 5-panel, rigid-connected Camelback pony truss
span length:	100.0'	substructure:	steel pile abutments with corrugated metal back- and wingwalls
total length:	102.0'	floor/decking:	concrete deck over steel stringers
roadway wdt.:	24.6'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: back-to-back channels tied with battens; vertical: I-beams; diagonal: I-beams; floor beams: I-beams bolted to superstructure; bottom lateral: angle irons; railings: I-beams which terminate in a streamlined curve

This bridge runs east-west over Bow Creek. It is very similar in design to **CEDA03, CEDA06, CEDA07** and **CEDA19.** The sturdy elements used in the bridge's construction, the streamline detailing on its railing, and its good state of repair suggest a mid-1930s construction date.

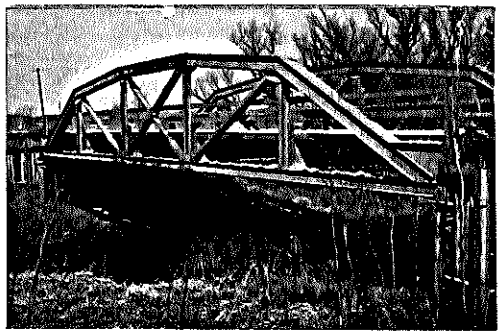
The Bow Creek Bridge is a typical Camelback pony truss, probably designed from state standard plans and dating from the mid-1930s.

NAME(S) OF STRUCTURE
Bow Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001413215; field inspection by Charlene K. Roise, 21 April 1990.

INVENTORIED BY	AFFILIATION	DATE
Charlene K. Roise	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Perrin Creek Bridge
NDOR: C001413315

CEDA14

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county highway over Perrin Creek; S14/15, T29N, R2E
1.5 miles southeast of Coleridge; Cedar County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 31)

CONDITION
fair

OWNER
Cedar County

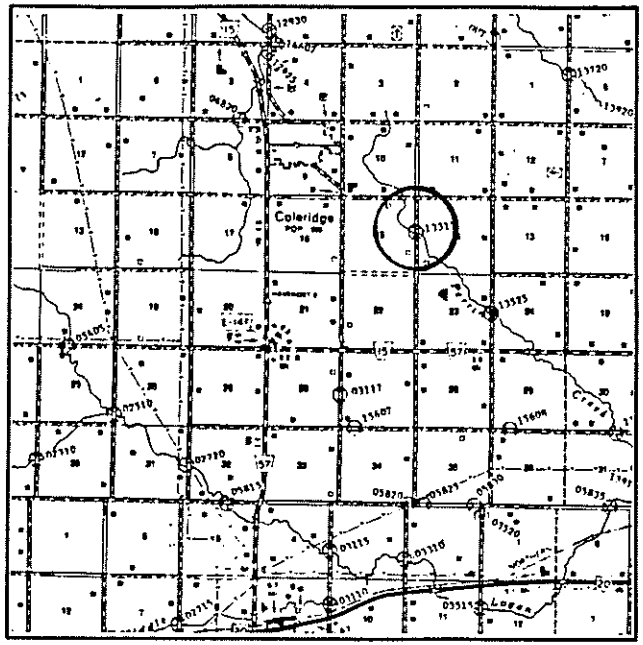
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt pony truss
span length:	40.0'	substructure:	concrete wingwalls and abutments
total length:	40.0'	floor/decking:	double-layer timber deck over wood stringers
roadway wdt.:	14.8'	other features:	upper chord: back-to-back channel beams with cover plate and battens; lower chord: looped square rods; vertical: 4 angles connected by lacing; counter: rods with turnbuckles; bracing: through deck; floor beams: I-beams, with U-bolt connections to superstructure; railings: 2 angles; endpost-mounted builder's plates: **Built by the Western Bridge & Construction Co. Omaha. Neb.**

This bridge runs north-south over Perrin Creek. As indicated by builder's plates on the bridge itself, it was erected by the Western Bridge and Construction Company of Omaha. County records do not specifically refer to the construction of this bridge. Proceedings of the County Commissioners indicate, however, that the Western Bridge Company was awarded the annual bridge construction contract for Cedar County from 1907 to 1911 and in 1913. In 1915, the commissioners decided to construct bridges under their own supervision, and gave Western the contract for providing materials only. Western also supplied materials from 1918 to 1920, and apparently built bridges as well in 1919 and into the 1920s. Given the structure's wooden stringers and the narrow roadway width, it is likely that the Perrin Creek Bridge was built prior to the county's adoption of state standardized plans in 1914. (State plans required roadways at least 16 feet wide.) It is thus likely that the bridge was built between 1907 and 1913.

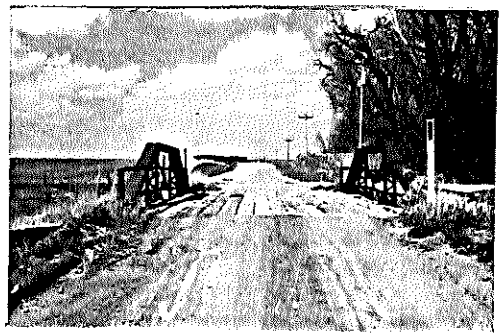
The U-bolt connections, wood stringers and concrete abutments distinguish this structure somewhat when compared to other bridges built during the first decades of the 20th century.

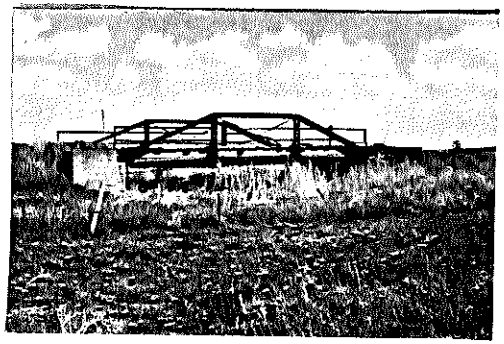
NAME(S) OF STRUCTURE
Perrin Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001413315; Proceedings of the Cedar County Commissioners, 1888-1926, Cedar County Courthouse, Hartington, Nebraska; field inspection by Charlene K. Roise, 21 April 1990.

INVENTORIED BY
Charlene K. Roise

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Perrin Creek Bridge
NDOR: C001413525

CEDA15

DATE(S) OF CONSTRUCTION
ca.1925

LOCATION
county highway over Perrin Creek; S23/24, T29N, R2E
2 miles south and 2 miles east of Coleridge; Cedar County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 29)

CONDITION
fair

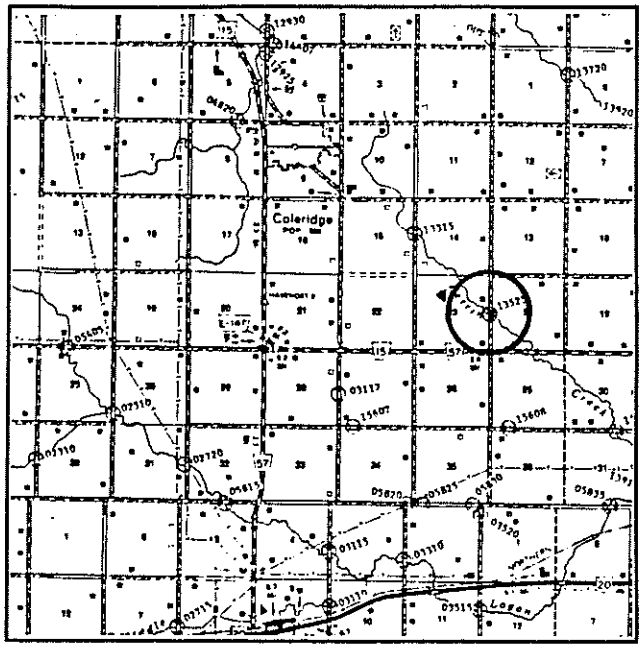
OWNER
Cedar County

span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt pony truss
span length:	40.0'	substructure:	steel pile abutments with timber back- and wingwalls
total length:	40.0'	floor/decking:	double-layer timber deck over I-beam stringers
roadway wdt.:	15.4'	other features:	upper chord: back-to-back channel beams with cover plate and battens; lower chord: looped square rods; vertical: 4 angles connected by lacing; counter: looped rods with turnbuckles; bracing: through deck; floor beams: I-beams; bottom lateral: round rods; railings: 2 angles; endpost-mounted builder's plates: **Built by the Western Bridge & Construction Co, Omaha. Neb.**

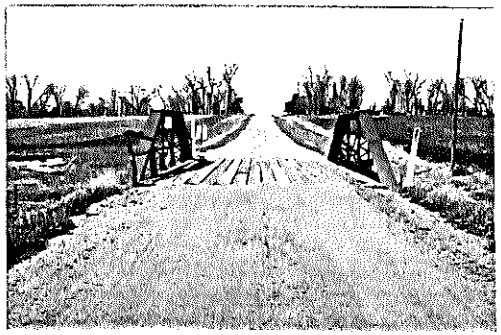
This bridge runs north-south over Perrin Creek. As indicated by the builder's plates on the bridge itself, it was fabricated by the Western Bridge and Construction Company of Omaha. County records do not specifically refer to the construction of this bridge. Proceedings of the County Commissioners indicate, however, that the Western Bridge Company was awarded the annual bridge construction contract for Cedar County from 1907 to 1911 and in 1913. In 1915, the commissioners decided to construct bridges under their own supervision, and gave Western the contract for providing materials only. Western also supplied materials from 1918 to 1920, and apparently built bridges as well in 1919 and into the 1920s. Standard plans distributed by the Nebraska Department of Public Works include a 40-foot span, 3-panel, pin-connected pony truss which is very similar in design to the Perrin Creek Bridge. Plan #202 is dated 1926, but a note indicates that it was retraced from a tracing from 1922, suggesting this bridge dates from the early to mid-1920s. The Perrin Creek Bridge is a typical, late example of a common structural type.

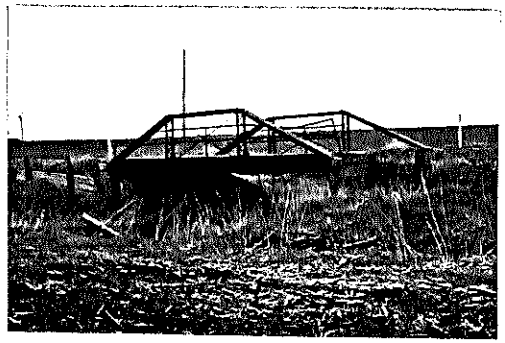
NAME(S) OF STRUCTURE
Perrin Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001413525; Proceedings of the Cedar County Commissioners, 1888-1926, Cedar County Courthouse, Hartington, Nebraska; "40 Feet Span, 3 Panel - Pin Connected - Low Truss -- Wood Floor," 1926, plan number 202, located in Bridge Division, Nebraska Department of Roads, Lincoln, Nebraska; field inspection by Charlene K. Roise, 21 April 1990.

INVENTORIED BY
Charlene K. Roise

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Logan Creek Bridge
NDOR: C001416410

CEDA16

DATE(S) OF CONSTRUCTION
ca.1905

LOCATION
county highway over Logan Creek; S13/14, T28N, R3E
2.5 miles south, 4 miles east of Laurel; Cedar County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 18)

CONDITION
fair

OWNER
Cedar County

span number:	1	superstructure:	steel, 6-panel, pin-connected Pratt through truss
span length:	100.0'	substructure:	timber wingwalls and abutments
total length:	100.0'	floor/decking:	double-layer timber deck over I-beam stringers
roadway wdt.:	16.4'	other features:	upper chord: back-to-back channel beams with cover plate and battens; lower chord: 2 punched eyebars; vertical: back-to-back channels with lacing except end vertical, which a 2 round rods; counter: 2 eyebars or 2 square rods; sway and portal bracing: 2 angles; top and bottom laterals: round rods; floor beams connected to superstructure by U-bolt; railings: modern

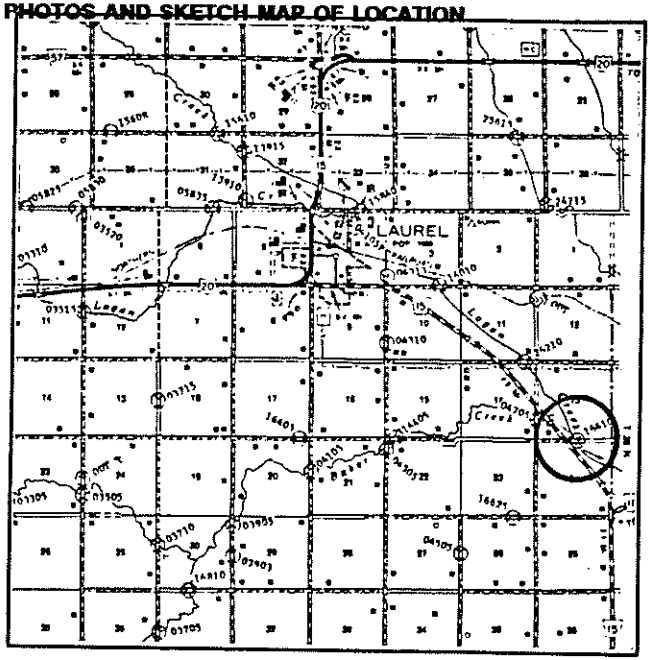
This bridge carries an east-west county highway over Logan Creek. County records do not specifically refer to the construction of this structure. The county adopted state standard plans in 1914. Since no state plans feature U-bolt connections, this bridge dates prior to 1914, and is probably from the first decade of the 20th century.

Of the 24 bridges surveyed in Cedar County, this is one of four through trusses, three of which are Pratts. With its construction history largely undocumented, this bridge is one of the less distinguished examples of its type found in the statewide bridge inventory.

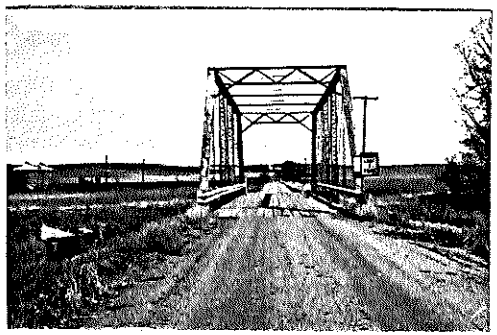
NAME(S) OF STRUCTURE

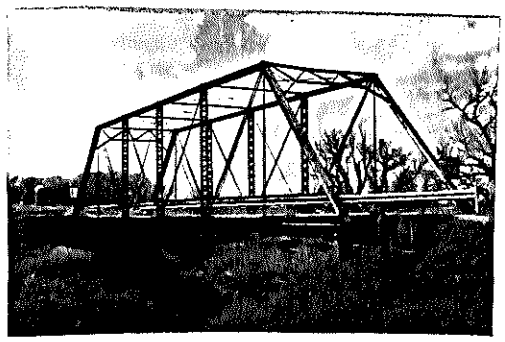
Logan Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001416410; Proceedings of the Cedar County Commissioners, 1888-1926, Cedar County Courthouse, Hartington, Nebraska; field inspection by Charlene K. Roise, 21 April 1990.

INVENTORIED BY

Charlene K. Roise

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bow Creek Bridge
NDOR: C001422005

CEDA17

DATE(S) OF CONSTRUCTION
1914

LOCATION
county highway over Bow Creek; S25/36, T32N, R2E
1.2 miles south of St. James; Cedar County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 45)

CONDITION
fair

OWNER
Cedar County

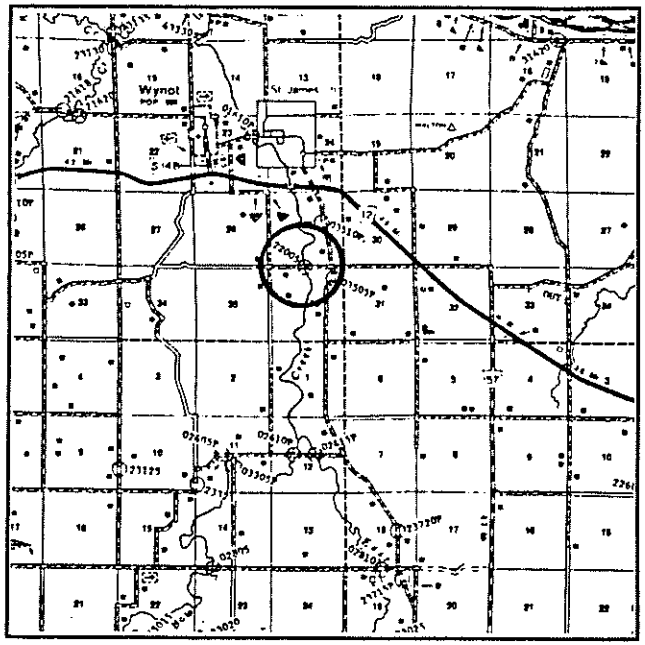
span number:	1	superstructure:	steel, 10-panel, pin-connected Parker through truss
span length:	175.0'	substructure:	steel pile bent and cylinder abutments with timber back- and wingwalls
total length:	177.0'	floor/decking:	single-layer timber deck over I-beam stringers
roadway wdt.:	16.0'	other features:	upper chord: back-to-back channel beams with cover plate and battens; lower chord: 2 looped eyebars; vertical: back-to-back channels with lacing, except end vertical which are 2 square rods; three types of counter: 2 looped eyebars, 2 square rods, 2 round rods with turnbuckles; portal bracing: angles with plates riveted at every intersection; sway bracing: round rods with turnbuckles; floor beam: I-beam bolted to plate riveted to superstructure; top and bottom laterals: round rods; railings: channel

This bridge runs east-west over Bow Creek. Proceedings of the Cedar County Commissioners report that a new steel bridge was built two miles south of Wynot in 1914 for $5,013.57. Although the records do not give more specific details about the location or the type of bridge constructed, it appears that this is this single-span steel truss. Most of the bridges built in 1914 cost $1,000 to $1,500, so the Wynot bridge is far more expensive, as is appropriate for a structure of its size and type. The Empire Bridge Company of Omaha received the annual county bridge contract for 1914, and thus appears to be responsible for the bridge's erection. Beginning in that year, all bridges built by the county were designed from plans provided by the state; however, no extant plans at the Department of Roads match this design. Today the deck of the Bow Creek Bridge is in deteriorated condition, but the truss is otherwise intact.

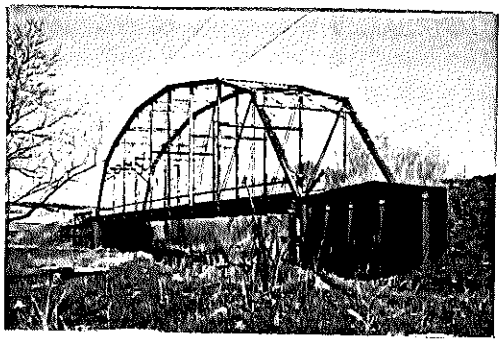
Of the 24 bridges surveyed in Cedar County, four were through trusses, the other three, Pratts. The Bow Creek Bridge's 175-foot span is the second-longest surveyed in Cedar County, exceeded only by the Meridian Highway Bridge (**CEDA23**). It is a large, well-preserved example of the work of a noteworthy Omaha firm, the Empire Bridge Company.

NAME(S) OF STRUCTURE
Bow Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001422005; Proceedings of the Cedar County Commissioners, 1888-1926, Cedar County Courthouse, Hartington, Nebraska, specifically 6 March 1914 (Book 4, page 322) for award of contract to Empire and 20 January 1915 (Book 4, page 387) for list of bridges built in 1914; field inspection by Charlene K. Roise, 21 April 1990.

INVENTORIED BY
Charlene K. Roise

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bow Creek Bridge
NDOR: C001422935

CEDA18

DATE(S) OF CONSTRUCTION
ca.1935

LOCATION
county highway over Bow Creek; S28/29, T31N, R2E
2.5 miles northeast of Hartington; Cedar County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 33)

CONDITION
good

OWNER
Cedar County

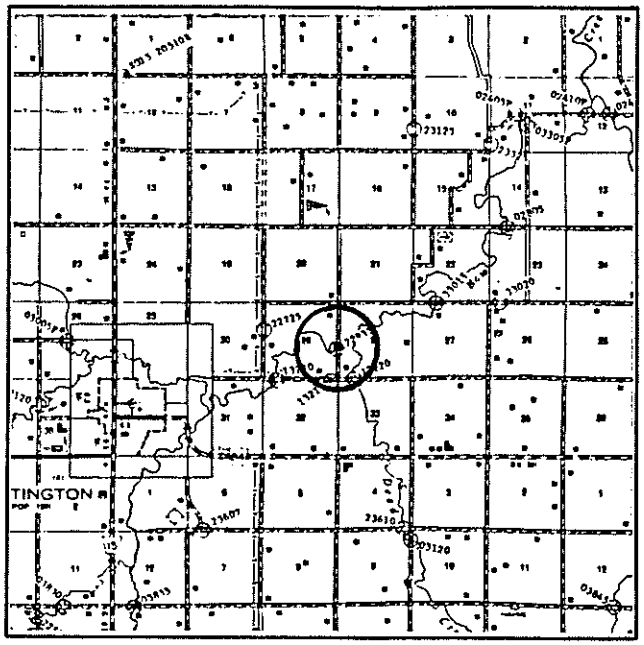
span number:	1	superstructure:	steel, 5-panel, rigid-connected Camelback pony truss
span length:	100.0'	substructure:	steel pile abutments with corrugated metal back- and wingwalls
total length:	102.0'	floor/decking:	concrete with metal edge
roadway wdt.:	24.6'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: back-to-back channels tied with battens; vertical: I-beams; diagonal: I-beams; floor beams: I-beams bolted to superstructure; bottom lateral: angles; railings: I-beams which terminate in a streamlined curve

This bridge runs north-south over Bow Creek. It is very similar in design to **CEDA03, CEDA06, CEDA07** and **CEDA13.** The sturdy elements used in the bridge's construction, the streamline detailing on its railing, and its good state of repair suggest a mid-1930s construction date.

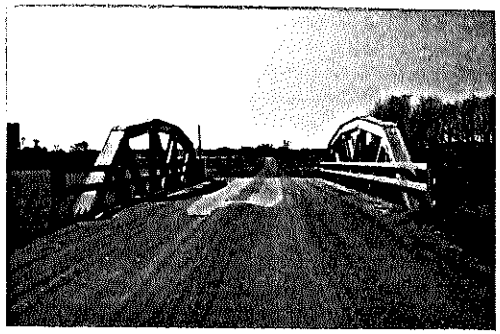
The Bow Creek Bridge is a typical Camelback pony truss, probably designed from state standard plans and dating from the mid-1930s.

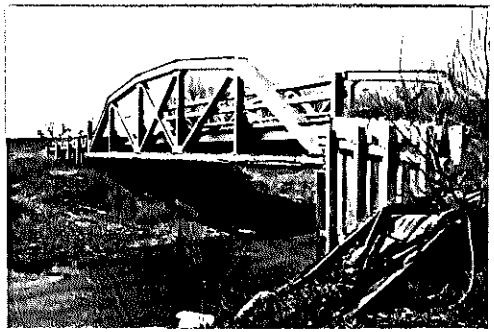
NAME(S) OF STRUCTURE
Bow Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001422935; field inspection by Charlene K. Roise, 21 April 1990.

INVENTORIED BY
Charlene K. Roise

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C001423615

CEDA19

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county highway over intermittent stream; S6/7, T30N, R3E
1 mile south, 6 miles east of Hartington; Cedar County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 31)

CONDITION

OWNER
Cedar County

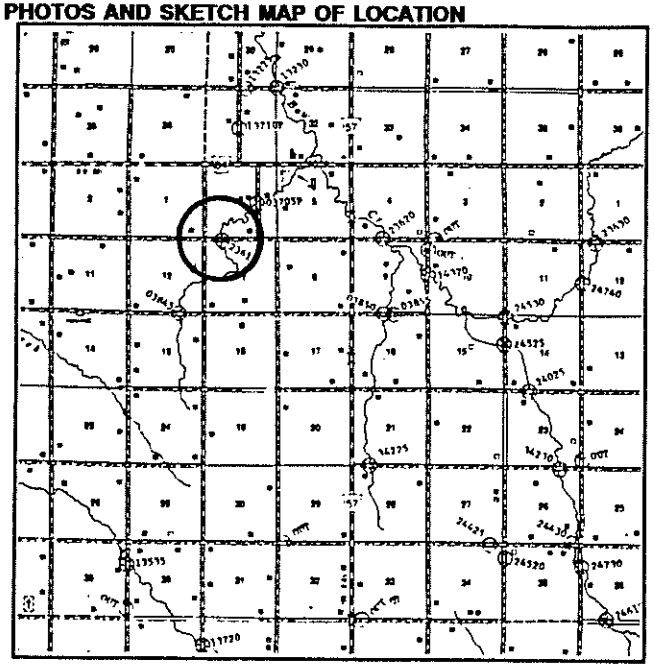
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt pony truss
span length:	50.0'	substructure:	timber wingwalls and abutments
total length:	50.0'	floor/decking:	double-layer timber deck over I-beam stringers
roadway wdt.:	14.9'	other features:	upper chord: back-to-back channel beams with cover plate and battens; lower chord: 2 looped eyebars; vertical: 4 angles connected by lacing; counter: 2 round rods with turnbuckles; bracing: through deck; floor beams: I-beams; railings: 2 angles; endpost-mounted builder's plates: **Built by the Western Bridge & Construction Co. Omaha. Neb.**

This bridge carries a minimum maintenance road running east-west over a stream which feeds into East Bow Creek. As indicated by the builder's plates on the bridge itself, this structure was fabricated by the Western Bridge and Construction Company of Omaha. County records do not specifically refer to the construction of this bridge. Proceedings of the County Commissioners indicate, however, that the Western Bridge Company was awarded the annual bridge construction contract for Cedar County from 1907 to 1911 and in 1913. In 1915, the commissioners decided to construct bridges under their own supervision, and gave Western the contract for providing materials only. Western also supplied materials from 1918 to 1920, and apparently built bridges as well in 1919 and into the 1920s. Given the structure's narrow roadway width, it is likely that this bridge was built prior to the county's adoption of state standardized plans in 1914, since state plans required roadways at least 16 feet wide. It is thus likely that the bridge was built between 1907 and 1913.

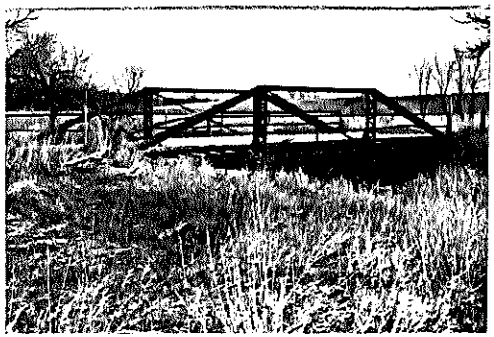
This bridge is typical of the Pratt pony trusses built in Nebraska just prior to imposition of state standard design.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001423615; Proceedings of the Cedar County Commissioners, 1888-1926, Cedar County Courthouse, Hartington, Nebraska; field inspection by Charlene K. Roise, 21 April 1990.

INVENTORIED BY
Charlene K. Roise

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
East Bow Creek Bridge
NDOR: C001424525

CEDA20

DATE(S) OF CONSTRUCTION
ca.1913

LOCATION
county highway over East Bow Creek; S14/15, T30N, R3E
7.5 miles south, 1 mile west of Obert; Cedar County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 31)

CONDITION
fair

OWNER
Cedar County

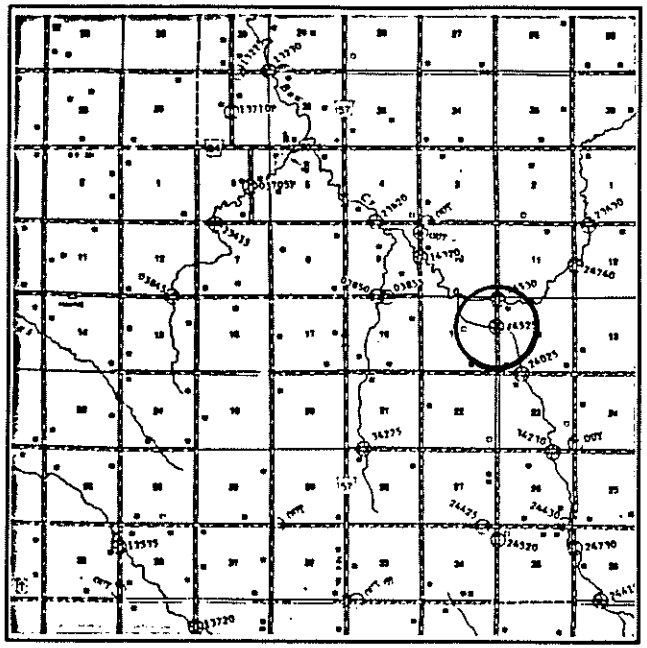
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt pony truss
span length:	45.0'	substructure:	steel pile abutments with timber wing- and backwalls
total length:	46.0'	floor/decking:	double-layer timber deck over I-beam stringers
roadway wdt.:	14.2'	other features:	upper chord: back-to-back channel beams with cover plate and battens; lower chord: 2 looped eyebars; vertical: 2 angles with lacing; counter: round rods with turnbuckles; bracing: through deck; floor beams: I-beams; bottom laterals: round rods; railings: 2 angles; endpost-mounted builder's plates: **Built by the Western Bridge & Construction Co. Omaha. Neb.**

This bridge runs north-south over East Bow Creek. As indicated by the builder's plates on the bridge itself, this structure was fabricated by the Western Bridge and Construction Company of Omaha. County records do not specifically refer to the construction of this bridge. Proceedings of the County Commissioners indicate, however, that the Western Bridge Company was awarded the annual bridge construction contract for Cedar County from 1907 to 1911 and in 1913. In 1915, the commissioners decided to construct bridges under their own supervision, and gave Western the contract for providing materials only. Western also supplied materials from 1918 to 1920, and apparently built bridges as well in 1919 and into the 1920s. Standard plans from Nebraska's Department of Public Works include a 3-panel, 45-foot span, pin-connected Pratt pony truss with a wood floor which is very similar to this bridge. The plan is dated 1926. A note indicates that it was retraced from a tracing of 1922 which, in turn, may have been modeled after a plan from the previous decade. Since state plans call for a minimum 16-foot roadway width, this bridge may date from the transition period ca.1913 just after standard state plans were issued but before the county adopted them in 1914.

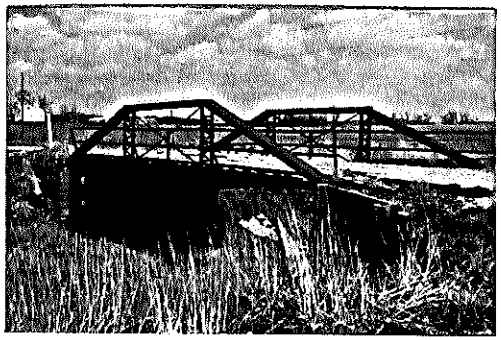
The East Bow Creek Bridge is typical of pony trusses built in Nebraska in the early 20th century.

NAME(S) OF STRUCTURE
East Bow Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001424525; Proceedings of the Cedar County Commissioners, 1888-1926, Cedar County Courthouse, Hartington, Nebraska; "Standard 15-Ton Bridge Plan, 3 Panel-45 Ft. Span-16 Ft. Roadway, Pin-Connected-Wood Floor," 1926, plan number 303, located in Bridge Division, Nebraska Department of Roads; field inspection by Charlene K. Roise, 21 April 1990.

INVENTORIED BY
Charlene K. Roise

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
East Bow Creek Bridge
NDOR: C001424615

CEDA21

DATE(S) OF CONSTRUCTION
ca.1905

LOCATION
county highway over East Bow Creek; S36, T29N, R3E / S1, T28N, R3E
8.5 miles east, 1 mile north of Coleridge; Cedar County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 20)

CONDITION
fair

OWNER
Cedar County

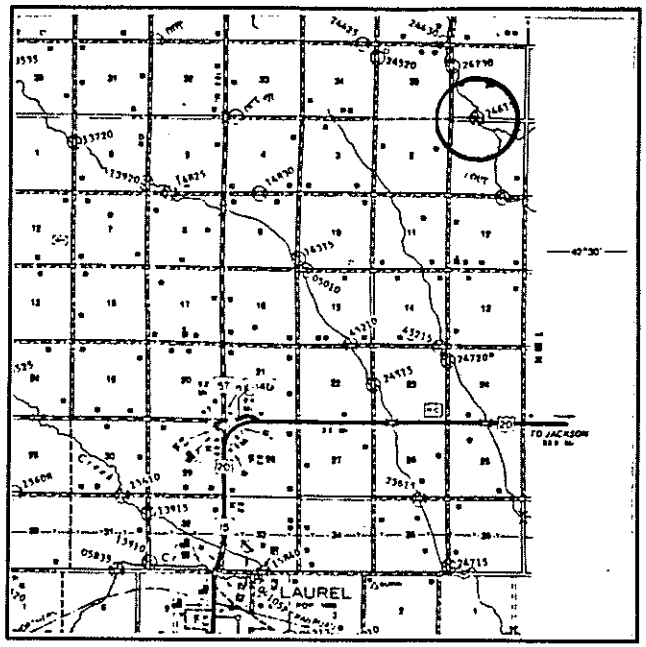
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt pony truss
span length:	50.0'	substructure:	steel pile abutments with timber back- and wingwalls
total length:	50.0'	floor/decking:	single-layer timber deck with wood curbs over I-beam stringers
roadway wdt.:	14.4'	other features:	upper chord: back-to-back channel beams with cover plate and battens; lower chord: 2 punched eyebars; vertical: 4 angles tied with battens; counter: 2 square rods with turnbuckles; bracing: through deck; floor beams: I-beams; bottom lateral: round rods; railings: 2 angles

This bridge runs east-west over East Bow Creek. Proceedings of the Cedar County Commissioners do not specifically refer to the construction of this bridge, but the structure's narrow roadway indicates that it was probably built prior to 1914, when the county adopted state plans requiring a minimum 16-foot roadway. Many similar bridges in the county were built by the Western Bridge & Construction Company, which received annual bridge contracts from Cedar County from 1907 to 1911, and again in 1913. Since Western usually marked each bridge with a plate, however, it seems unlikely that the East Bow Creek Bridge a product of Western. The bridge thus appears to date from 1912, or from 1906 or earlier.

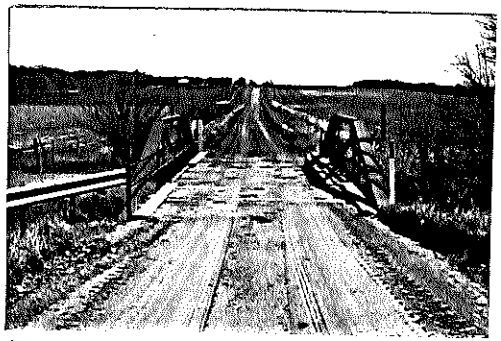
This bridge is similar to many small Pratt pony trusses built in Nebraska during the first decade and a half of the 20th century.

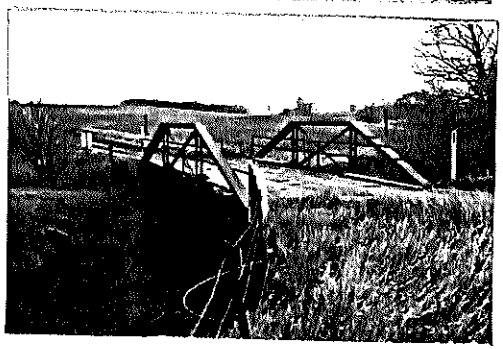
NAME(S) OF STRUCTURE
East Bow Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001424615; Proceedings of the Cedar County Commissioners, 1888-1926, Cedar County Courthouse, Hartington, Nebraska; field inspection by Charlene K. Roise, 21 April 1990.

INVENTORIED BY
Charlene K. Roise

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bow Creek Bridge
NDOR: C001433015

CEDA22

DATE(S) OF CONSTRUCTION
ca.1920

LOCATION
county highway over Bow Creek; S22/27, T31N, R2E
6.5 miles south, 1 mile west of Wynot; Cedar County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 20)

CONDITION
good

OWNER
Cedar County

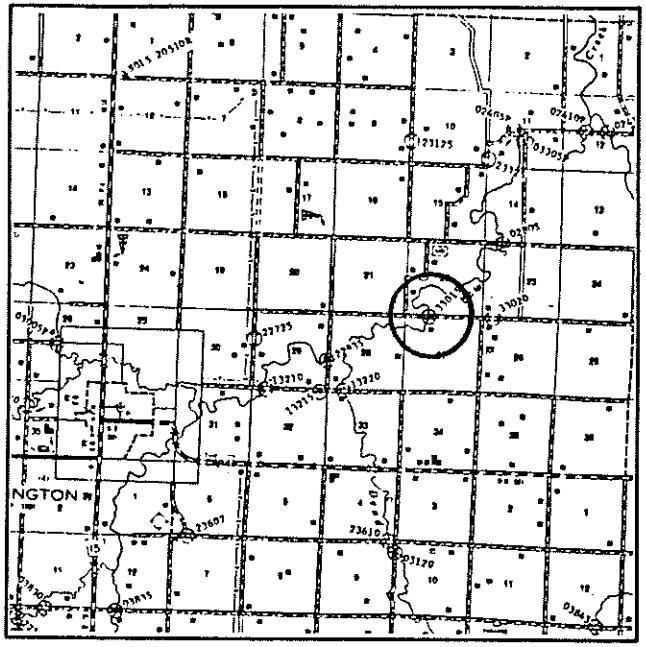
span number:	1	superstructure:	steel, 8-panel, pin-connected Pratt through truss
span length:	140.0'	substructure:	steel pile abutments; timber / corrugated metal back- and wingwalls
total length:	142.0'	floor/decking:	corrugated metal covered by dirt over I-beam stringers
roadway wdt.:	16.0'	other features:	upper chord: back-to-back channel beams with cover plate and lacing; lower chord: 2 punched eyebars; vertical: back-to-back channels with lacing; diagonal: 2 eyebars; counter: round rods with turnbuckles; sway and portal bracing: back-to-back angles; top and bottom laterals: round rods; railings: 2 cables

This bridge runs east-west over Bow Creek. Proceedings of the County Commissioners do not specifically refer to the construction of this bridge. Its design, however, is similar to several standard state plans developed in the 1910s and early 1920s. The county adopted state plans in 1914.

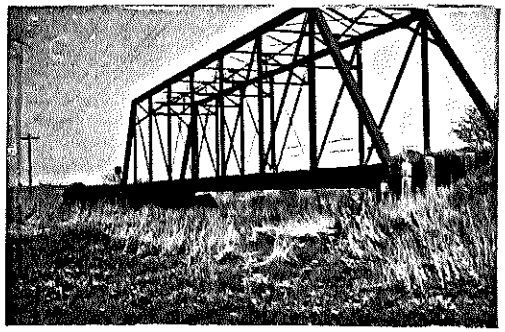
Of the 24 bridges surveyed in Cedar County, this is one of four through trusses, three of which are Pratts. The Bow Creek Bridge is a typical example of a mainstay vehicular truss type, built extensively throughout Nebraska in the early 1900s.

NAME(S) OF STRUCTURE
Bow Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001433015; Proceedings of the Cedar County Commissioners, 1888-1926, Cedar County Courthouse, Hartington, Nebraska; bridge plans at the Bridge Division, Nebraska Department of Roads, Lincoln, Nebraska; field inspection by Charlene K. Roise, 21 April 1990.

INVENTORIED BY
Charlene K. Roise

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Meridian Bridge [Yankton Bridge; Missouri River Bridge] CEDA23
NDOR: S081 21468

DATE(S) OF CONSTRUCTION
1924

LOCATION
U.S. Highway 81 over the Missouri River; S2, T33N, R1W
just south of Yankton, South Dakota; Cedar County, Nebraska

USE (ORIGINAL / CURRENT)
highway/railroad bridge / highway bridge

RATING NRHP eligible (score: 76)

CONDITION
excellent

OWNER
State of South Dakota

span number:	19	superstructure:	double-deck, riveted Pratt vertical-lift truss with Pratt through truss and steel girders
span length:	250.0'	substructure:	solid concrete abutments and piers
total length:	3013.0'	floor/decking:	metal
roadway wdt.:	33.0'	other features:	truss spans generally have flat upper chords and predominately channel-section webs

Carrying U.S. Highway 81 over the Missouri River, the Meridian Highway Bridge connects downtown Yankton, South Dakota on the north with rural Cedar County on the south. Prior to the bridge's completion in 1924, transportation across the Missouri River at this point relied on either ferry service, inaugurated in 1870, or a seasonally operated pontoon bridge, installed in 1890. As a protection against ice damage, the pontoon bridge was disassembled each year before winter freeze and spring thaw -- and then reconstructed when the pontoons could be placed on open water or firm ice. The disruption was particularly troublesome for Yankton merchants, who counted northern Nebraska in their trade territory. In 1915, Yankton business interests organized a private bridge company and gained federal approval to build a permanent bridge across the Missouri, but the enterprise lapsed with the country's entrance into World War I. In 1919, the project was revived with the full backing of the Yankton Chamber of Commerce, which helped organize a new bridge company, with local seed merchant D.B. Gurney as president. In addition to its regional importance, the proposed bridge would be one of the last major links in an international highway running from Winnipeg, Canada to Mexico City, Mexico. Since this road followed the Sixth Principal Meridian, it was commonly called the "Meridian Highway." The Yankton boosters named both their bridge company and bridge after the route.

In January 1920, the Meridian Highway Bridge Company retained Harrington, Howard and Ash of Kansas City, Missouri to design a combined railroad and highway bridge, with a movable span to allow unobstructed navigation. Established in 1914 with John Lyle Harrington [1868-1942] as senior partner, the engineering firm was especially well respected for its movable bridges. While in a previous partnership with bridge engineer John Alexander Low Waddell, Harrington had helped develop a major movable type, which is still known as the Waddell and Harrington Vertical Lift. Operating on the same principal as counterbalanced, hung, window sash, the design employed "a simple span equipped with machinery for operation, suspended at each end by wire ropes which pass over sheaves on towers and connect to counterweights about equal to the span weight." In their plans for the Yankton bridge, the Kansas City firm incorporated a standard, Waddell and Harrington, vertical-lift span, measuring 250 feet in length with a maximum lift of 27 feet. Like the other six river spans in the bridge, the vertical-lift span was a heavy, riveted, steel, Pratt truss with flat upper chord, predominately channel-section web, and concrete piers. Approached by extended, trestle work on both shores, the trusses were equipped with two concrete decks: an upper level above the top chord for highway traffic, and a lower level, just above the bottom chord, for railroad traffic.

Originally, the company had hoped to finance the bridge through an initial stock subscription, covering future maintenance costs and shareholder dividends by toll charges. However, the venture was shy several hundred thousand dollars of the estimated cost when, in the fall of 1920, it awarded its first construction contract for substructure work to the Missouri Valley Bridge and Iron Company of Leavenworth, Kansas. When the substructure was completed two years later, the company still had not raised all the necessary capital, causing a temporary suspension of activity. Construction finally resumed in the fall of 1923, with Kelly Atkinson Company of Chicago serving as contractor; the American Bridge Company as fabricator. The steel work was completed in the spring of 1924, and the lift span was raised for the first time in July. When the bridge was officially opened to traffic in October 1924, the total cost stood at $1,146,319. Although the lower deck was equipped with trackage, the anticipated rail route never materialized, and the bridge remained a pure highway facility.

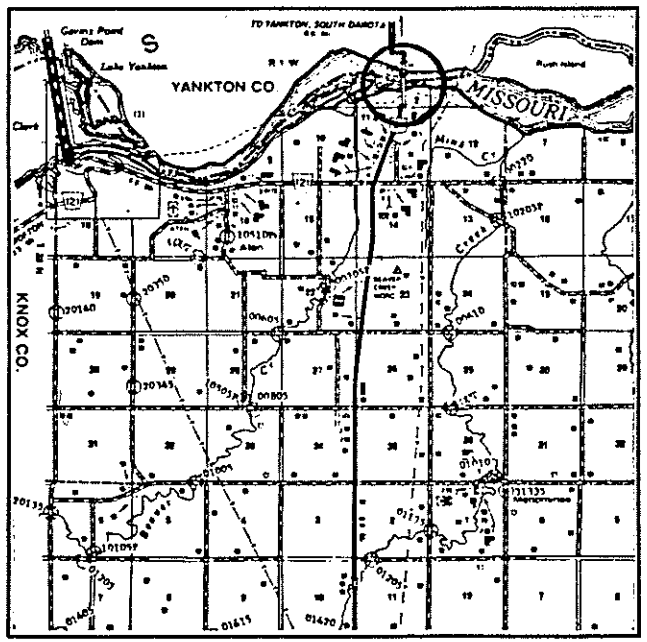
The construction of the Meridian Highway Bridge was an undisputed boon for the Yankton region, but it was of less immediate advantage to the bridge company's shareholders, who earned a total of about two percent on their investment over a twenty-year period. In 1946, the bridge company agreed to sell the toll bridge to the City of Yankton for $700,000. After recovering the expense through toll collection, the city turned the bridge into a free facility, which was subsequently taken over by the State of South Dakota. The toll bridge era ended in 1953, the same year that the bridge's previously-idle lower deck was converted into a highway lane, allowing one-way traffic on both levels. After a partial rebuilding of the south approach in 1969, all remaining approach spans were replaced in the early 1980s, creating the present configuration of seven steel-girder shore spans on the north, twelve on the south. At approximately the same time, the vertical-lift span was deactivated and the counterweights removed from the towers. These later alterations were supervised by the Nebraska Department of Roads, although the bridge remains in South Dakota ownership.

Despite various modifications, the Meridian Highway Bridge retains the original configuration of its seven, main, steel-truss river spans, including the distinctive towers of the vertical-lift span. As the only example of vertical lift design in Nebraska and South Dakota, the bridge is eligible for the National Register under Criterion C. As the first permanent crossing of the Missouri River at this site, the bridge is also eligible under Criterion A, for its significant contributions to the region's transportation history and commercial development.

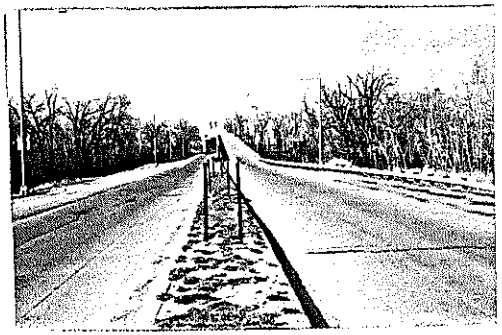
NAME(S) OF STRUCTURE

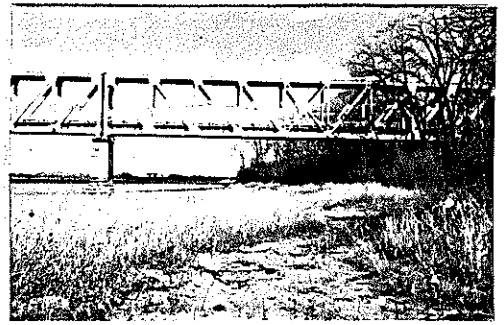
Meridian Bridge [Yankton Bridge; Missouri River Bridge]

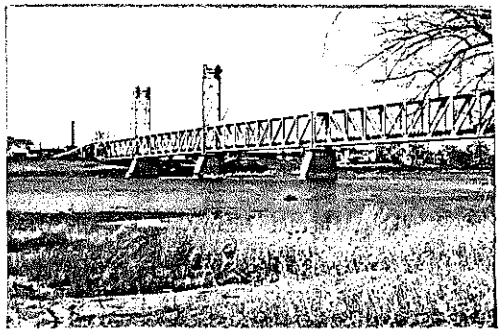
PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP







SOURCES

Fred H. Monfore, "Pioneer Dream of River Crossing Realized in Yankton Bridge Story." **Yankton Press and Dakotan,** June 13, 1961; "Yankton Bridge on the Meridian Highway Will Fill the Last Gap." **Nebraska Department of Public Works Monthly Report,** July 1922, p.10; Edwin Layton, "John Lyle Harrington," **Dictionary of American Biography, Supplement 3,** pp. 331-332; Ernest E. Howard, "General Elements in the Design of Vertical Lift Bridges," **Railway Age,** 70 (June 17, 1921), 1393; Otis Ellis Hovey, **Movable Bridges,** vol. 1 (New York: John Wiley and Sons, Inc., 1926), p.170; "First Contract Let," **Yankton Press and Dakotan,** September 27, 1920; Fred H. Monfore, "Free Bridge Goal of Yankton's Citizens Realized in 1953," **Yankton Press and Dakotan,** June 13, 1961; "[Plans for] Reconstruction and Repair Missouri River Bridge," Project No. F-81-4 (1002), Nebraska Department of Roads, Bridge Division. Also Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number S081 21468; field inspection by Charlene K. Roise, 21 April 1990.

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Niobrara River Bridge
NDOR: C0E1601105P

CHER01

DATE(S) OF CONSTRUCTION
1916; moved ca.1970

LOCATION
county road over the Niobrara River; S32, T33N, R31W
10.5 miles southwest of Kilgore; Cherry County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 28)

CONDITION
good

OWNER
Cherry County

span number: 1
span length: 100.0'
total length: 102.0'
roadway wdt.: 16.0'

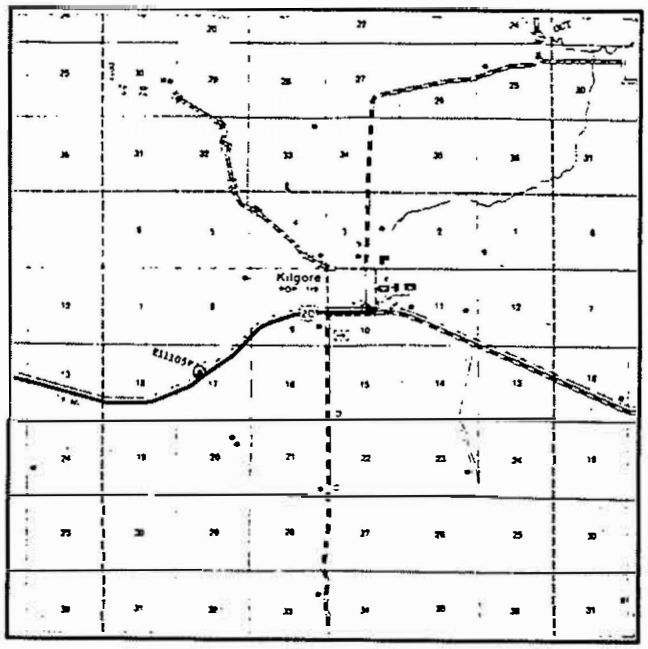
superstructure: steel, 6-panel pin-connected Pratt through truss
substructure: steel pile bent abutments with sheet piling back- and wingwalls
floor/decking: timber deck over steel stringers
other features: upper chord: 2 channels with cover plate and lacing; lower chord: 2 rectangular eyebars; vertical: 2 channels with lacing; 2 angles with batten plates at hip connection; diagonal: 2 rectangular looped eyebars; 1 square looped eyebar with turnbuckle; lateral bracing: round bar; strut: 2 angles; floor beam: I-beam field bolted at vertical; guardrail: 2 angles; builder's plate; **1916 THE CANTON BRIDGE COMPANY BUILDERS CANTON OHIO;** decorative lacing at portal; guardrail: timber; portal decoration; builders plate:

This medium-span through truss was one of several bridges erected by Cherry County in the aftermath of a disastrous flood on the Niobrara River in February 1916 (see **CHER02** for details). Immediately after the flood and over the next year, the county ordered Pratt through trusses from the Canton Bridge Company of Canton, Ohio. Ranging in span length from 100 feet to 130 feet, these trusses all featured similar pin-connected detailing. This span over the Niobrara 10-1/2 miles southwest of Kilgore is one of the 100-foot spans fabricated by Canton in 1916. The truss is seated on a relatively new substructure, and a 1919 atlas of Cherry County does not indicate the existence of a river crossing at this location, indicating that the span has been moved here at a later date. This could be the Lyons Bridge, the Hook Bridge or the Mouth-of-Snake Bridge, all rebuilt by Canton in 1916 and later removed. The source for this truss is not known at present, however.

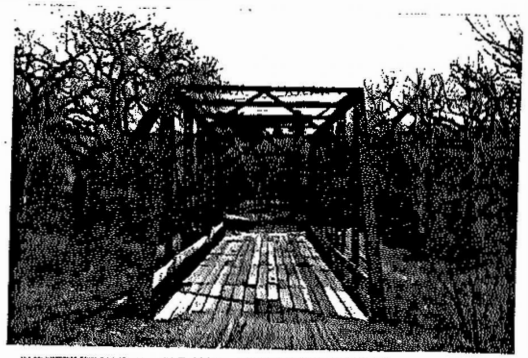
This bridge over the Niobrara River typifies the type of truss construction undertaken by the county in its extensive 1916-17 bridge reconstruction program. The loss of integrity associated with the subsequent move tends to diminish its interpretive value.

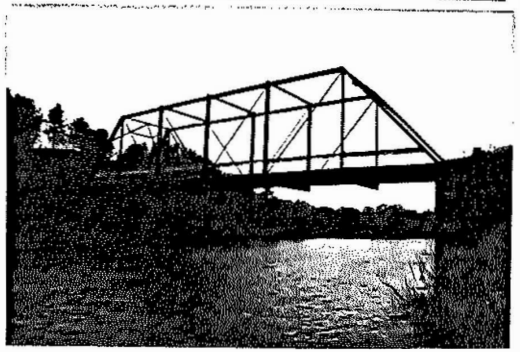
NAME(S) OF STRUCTURE
Niobrara River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C0E1601105P; Cherry County Commissioners' Record, BookB: 15 May 1899 (page 304), 24 April 1900 (page 374), 18 June 1900 (page 376), 24 July 12900 (page 388), 2 October 1900 (page 394), 2 January 1901 (page 419), located at Cherry County Courthouse, Valentine, Nebraska; field inspection by Clayton Fraser, 25 April 1990.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Twin Bridge [Big Creek Bridge] CHER02
NDOR: C0E1603505P

DATE(S) OF CONSTRUCTION
1900

LOCATION
county road over Big Creek; S12, T27N, R30W
7.9 miles northwest of Brownlee; Cherry County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 41)

CONDITION
good

OWNER
Cherry County

span number:	1	superstructure:	steel, 2-panel, pin-connected Pratt truss leg bedstead
span length:	34.0'	substructure:	truss legs at abutments and timber back- and wingwalls
total length:	35.0'	floor/decking:	timber over timber stringers
roadway wdt.:	14.0'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 angles; vertical: 4 angles with double lacing; diagonal: 2 looped square eyebars; floor beam: I-beam U-bolted to vertical; guardrail: timber; builder's plate: **1900 WROUGHT IRON BRIDGE CO. BUILDERS CANTON O.**

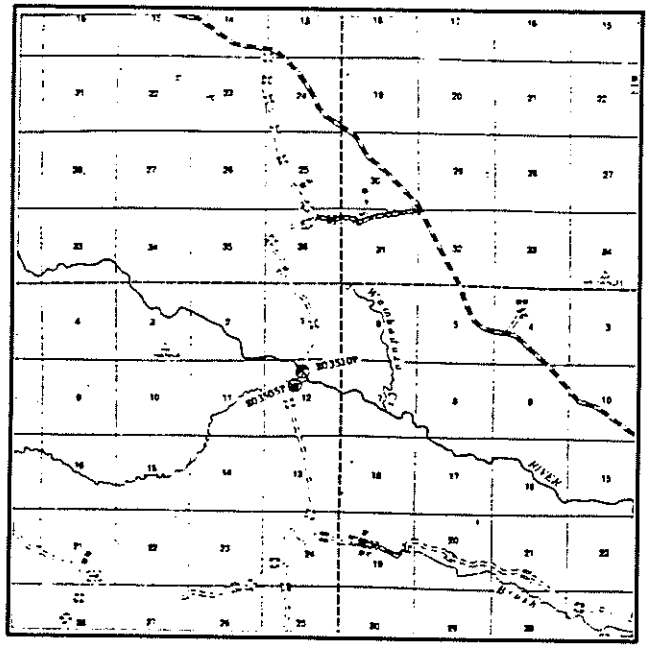
This small-scale bridge carries a two-track county road across Big Creek some eight miles northwest of Brownlee in rural south-central Cherry County. Comprised as a pinned Pratt bedstead truss, the bridge was erected in 1900 by the Wrought Iron Bridge Company. The Cherry County Commissioners first considered a span at this remote crossing in April 1900, while searching for a suitable location for a bridge over the nearby North Loup River. In June they solicited proposals for a steel stringer bridge over the Loup, a 30-foot span across the Snake River and this 35-foot span across Big Creek about three miles southwest of the Pass post office. Competitive proposals were received the following month from nine bridge contractors. The county awarded the construction contract to WIBCo for all three structures for a cost of $3500; by year's end all had been completed. So named for its (somewhat loose) resemblance to the Loup River Bridge (**CHER03**), the Twin Bridge has carried intermittent traffic since. The county has recently replaced the abutments and wingwalls for the approach spans, but the bedstead itself remains intact.

The Wrought Iron Bridge Company was one of the two largest vehicular bridge erectors in the country during the late 1900s, rivaling the giant King Iron Bridge Company in its nationwide trade. Though not as active in Nebraska as King, WIBCo did erect spans in the southeast part of the state and in Cherry County. Few WIBCo trusses are known to have survived in the state, however. The Ohio-based contractor maintained an extensive catalog of steel and iron spans, ranging from the standard to the esoteric. With its pinned Pratt configuration, the Twin Bridge represents the former more than the latter. The bedstead truss design enjoyed brief popularity in Nebraska in the late 1890s and early 1900s. A single "leg" functioned as both endpost and support at each corner. This combined super- and substructure reduced erection costs somewhat, but they were prey to flood and collision damage and suffered from inherent structural weaknesses relating to compression stress in the lower chords. Only a dozen bedsteads remain in Nebraska (half of which employ pinned Pratt configurations). The Twin Bridge is technologically significant as perhaps the best-preserved and best-documented among these.

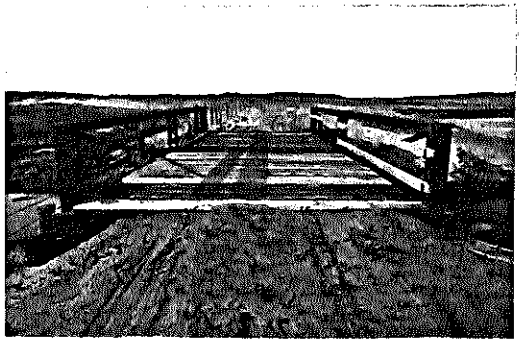
NAME(S) OF STRUCTURE

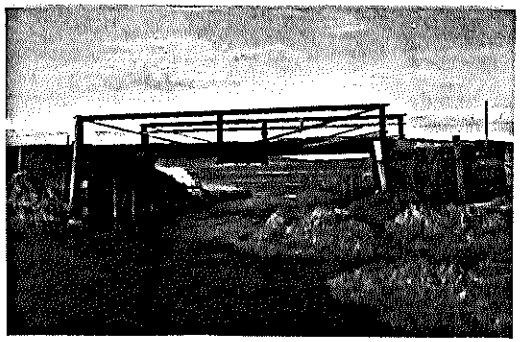
Twin Bridge [Big Creek Bridge]

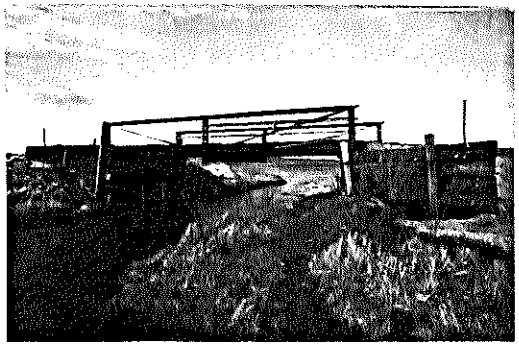
PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP







SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C0E1603505; Cherry County Commissioners' Record, BookB: 15 May 1899 (page 304), 24 April 1900 (page 374), 18 June 1900 (page 376), 24 July 12900 (page 388), 2 October 1900 (page 394), 2 January 1901 (page 419), located at Cherry County Courthouse, Valentine, Nebraska; field inspection by Clayton Fraser, 25 April 1990.

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Twin Bridge [North Loup River Bridge] CHER03
NDOR: C0E1603510P

DATE(S) OF CONSTRUCTION
1900

LOCATION
county road over the North Loup River; S12, T27N, R30W
7.9 miles northwest of Brownlee; Cherry County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 42)

CONDITION
fair

OWNER
Cherry County

span number:	8	superstructure:	steel stringer
span length:	16.0'	substructure:	steel pile bent abutments and piers with timber back- and wingwalls
total length:	129.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	15.6'	other features:	stringers: channel on outside with I-beams on interior; guardrail: 2 channels

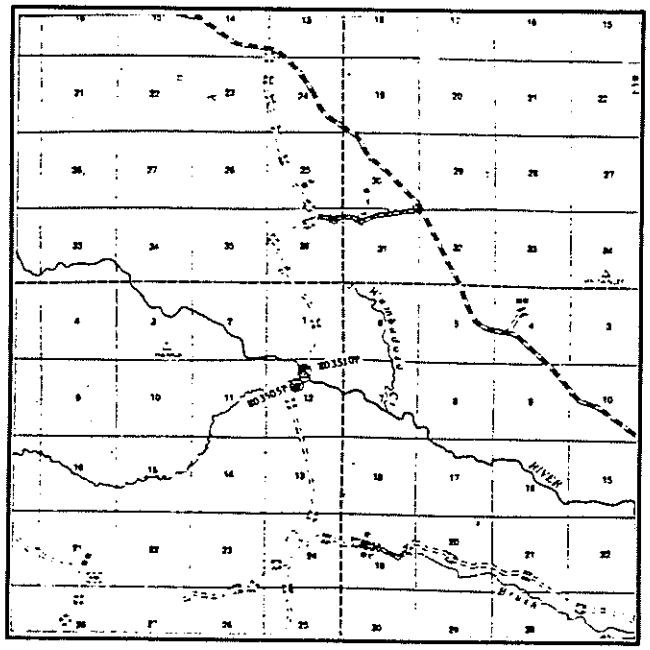
This steel pile bridge carries a two-track county road across Big Creek some eight miles northwest of Brownlee in rural south-central Cherry County. Comprised as a series of steel stringers, supported by steel piles, the bridge was erected in 1900 by the Wrought Iron Bridge Company. The Cherry County Commissioners first considered a span at this remote crossing when the received a citizens' petition in May 1899 for a crossing of the North Loup River in this remote part of the county. In June 1900 they solicited proposals for a 30-foot span across the Snake River, a 35-foot span across Big Creek (CHER02) and this steel stringer bridge over the Loup, about eight miles northwest of Brownlee Competitive proposals were received the following month from nine bridge contractors. The county awarded the construction contract to Wroght Iron for all three structures for a cost of $3500; by year's end all had been completed. So named for its (somewhat loose) resemblance to the Big Creek Bridge, the Twin Bridge has carried intermittent traffic since, with only maintenance-related repairs.

The Wrought Iron Bridge Company was one of the two largest vehicular bridge erectors in the country during the late 1900s, rivaling the giant King Iron Bridge Company in its nationwide trade. Though not as active in Nebraska as King, WIBCo did erect spans in the southeast part of the state and in Cherry County. Few WIBCo structures are known to have survived in the state, however. The Ohio-based contractor maintained an extensive catalog of steel and iron spans, ranging from the standard to the esoteric. With its steel stringer configuration, the Twin Bridge represents the former more than the latter. As one of the simplest of bridge types, steel stringers were built extensively throughout Nebraska in the early 20th century. Probably preserved by its extremely remote location, the Twin Bridge is significant as the oldest extant steel stringer vehicular bridge identified in the state.

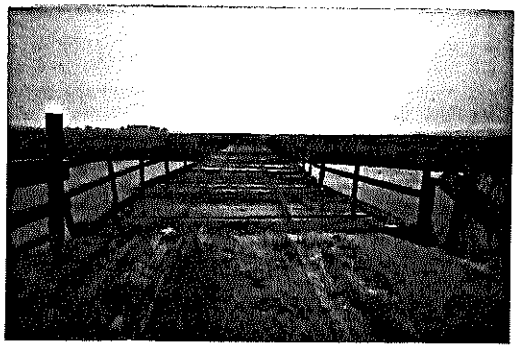
NAME(S) OF STRUCTURE

Twin Bridge [North Loup River Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C0E1603510P; Cherry County Commissioners' Record, Book B: 15 May 1899 (page 304), 24 April 1900 (page 374), 18 June 1900 (page 376), 24 July 12900 (page 388), 2 October 1900 (page 394), 2 January 1901 (page 419), located at Cherry County Courthouse, Valentine, Nebraska; field inspection by Clayton Fraser, 25 April 1990.

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Jack Darr Bridge [Niobrara River Bridge] CHER04
NDOR: C0E1605105

DATE(S) OF CONSTRUCTION
1916

LOCATION
county road over the Niobrara River; S33, T33N, R28W
6.9 miles southwest of Valentine; Cherry County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 48)

CONDITION
good

OWNER
Cherry County

span number: 1
span length: 123.0'
total length: 124.0'
roadway wdt.: 12.2'

superstructure: steel, 7-panel pin-connected Pratt through truss
substructure: concrete abutments (extending original steel cylinders) and wingwalls
floor/decking: timber deck over steel stringers
other features: upper chord: 2 channels with cover plates and lacing; lower chord: 2 rectangular looped eyebars; vertical: 2 channels with lacing; 1 square looped eyebar at hip connection; diagonal: 2 rectangular looped eyebars; 1 square looped eyebar with turnbuckle; lateral bracing: round bar; strut: 2 angles; floor beam: I-beam field bolted to vertical; guardrail: 2 angles; portal builder's plate: **1916 THE CANTON BRIDGE Co. BUILDERS CANTON OHIO**

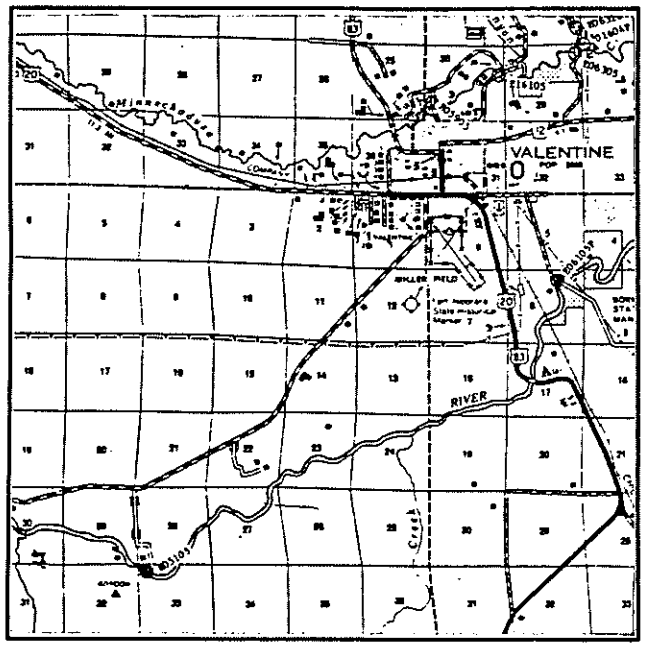
On February 16, 1916, the winter ice on the Niobrara River near the western edge of Cherry County began to break up as the river's level rose quickly. The flood that resulted moved inexorably downstream, pushing the ice pack in front of it and "virtually eating away the thick ice and destroying the county bridges," lamented the Cherry County Clerk. Before it passed through the county's eastern edge two days later, the flood had swept fourteen bridges away and damaged or destroyed seven others. Only four bridges over the Niobrara remained passable. In the aftermath of the flood, the county commissioners declared an emergency on February 29th and established a special fund to pay for the extensive repair and reconstruction. A representative from the Canton Bridge Company, which had held the county's annual bridge contract for 1915, conferred with the commissioners and assured them that work by his firm to rebuild several of the bridges would not constitute an annual contract. On March 24th, the commissioners visited the site of the Jack Darr Bridge, seven miles southwest of Valentine, with the Canton official, and in September they ordered a new steel truss to be put on the extended piers of the earlier bridge. Using steel rolled by Jones and Laughlin, Canton erected this Pratt through truss within a month, although the county did not pay its $6729 cost until two years later. The Jack Darr Bridge has carried light traffic since in this sparsely settled region.

The pinned Pratt through truss was the bridge of choice for medium-scale river crossings in Nebraska during the early 1900s, as the Cherry County Commissioners discovered in 1916. Of the fourteen Cherry County bridges surveyed on the Niobrara River (five of which were erected in 1916), thirteen are medium-span Pratts. Due in part to this natural calamity, these Niobrara River bridges represent the best-preserved group of county trusses in the state. The Jack Darr Bridge is historically significant for its association with the 1916 flood and for its representation of this transportation trend. It is technologically noteworthy as a well-documented example of a mainstay structural type.

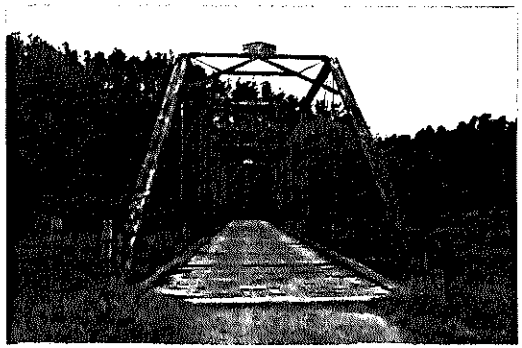
NAME(S) OF STRUCTURE

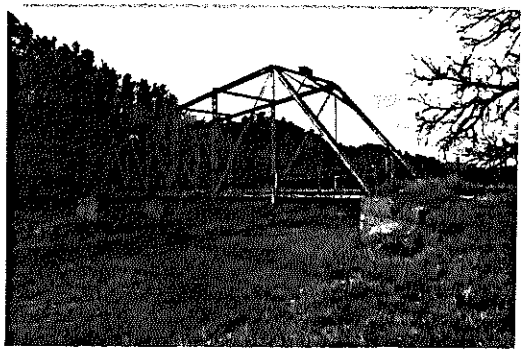
Jack Darr Bridge [Niobrara River Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C0E1605105; Cherry County Commissioners' Record, Book C: 27 July 1915 (page 162), 18 February 1916 (page 209), 23 February 1916 (page 209), 29 February 1916 (page 210), 3 March 1916 (page 211) 24 March 1916 (page 213), 9 September 1916 (page 245), 10 September 1918 (page 404), located at Cherry County Courthouse, Valentine, Nebraska; field inspection by Clayton Fraser, 25 April 1990.

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Borman Bridge
NDOR: C0E1606105P

CHER05

DATE(S) OF CONSTRUCTION
1916

LOCATION
county road over the Niobrara River; S8, T33N, R27W
2.3 miles southeast of Valentine; Cherry County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 48)

CONDITION

OWNER
Cherry County

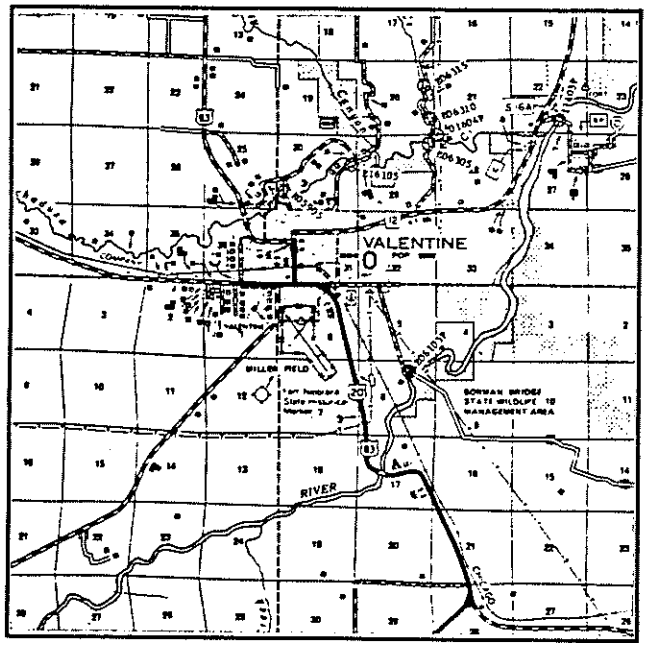
span number:	1	superstructure:	steel, 7-panel, pin-connected Pratt through truss
span length:	130.0'	substructure:	concrete abutments (extended for original steel cylinders)and wingwalls
total length:	131.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	12.7'	other features:	upper chord: 1 channels with cover plates and lacing; lower chord: 2 rectangular looped eyebars; vertical: 2 channels with lacing; 1 square eyebar at hip connection diagonal: 2 looped rectangular eyebars; lateral bracing: round bar; strut: 2 angles; floor beam: I-beam field bolted to vertical; guardrail: 2 angles; builder's plate: **1916 THE CANTON BRIDGE Co. CANTON OHIO**; decorative lacing at portal

On the afternoon of February 16, 1916, the winter ice on the Niobrara River near the western edge of Cherry County began to break up as the river's level rose quickly. The flood that resulted moved inexorably downstream, pushing the ice pack in front of it and "virtually eating away the thick ice and destroying the county bridges," lamented the Cherry County Clerk. Before it passed through the county's eastern edge two days later, the flood had swept fourteen bridges away and damaged or destroyed seven others. Only four bridges over the Niobrara remained passable. In the aftermath of the flood, the county commissioners declared an emergency on February 29th and established a special fund to pay for the extensive repair and reconstruction. A representative from the Canton Bridge Company, which had held the county's annual bridge contract for 1915, conferred with the commissioners and assured them that work by his firm to rebuild several of the bridges would not constitute an annual contract. On March 24th, the commissioners visited the site of the Borman Bridge (1900) southeast of Valentine with the Canton official, and two days later ordered a replacement span from the Ohio-based company. Using steel rolled by Cambria, Canton erected this pinned Pratt through truss within a month, although the county did not pay its $4230 cost until two years later. The Jack Darr Bridge has carried light traffic since in this sparsely settled region.

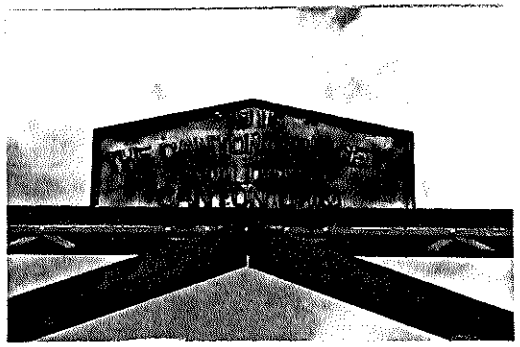
The pinned Pratt through truss was the bridge of choice for medium-scale river crossings in Nebraska during the early 1900s, as the Cherry County Commissioners discovered in 1916. Of the fourteen Cherry County bridges surveyed on the Niobrara River (five of which were erected in 1916), thirteen are medium-span Pratts. Due in part to this natural calamity, these Niobrara River bridges represent the best-preserved group of county trusses in the state. The Borman Bridge is historically significant for its association with the 1916 flood and for its representation of this transportation trend. It is technologically noteworthy as a well-documented example of a mainstay structural type.

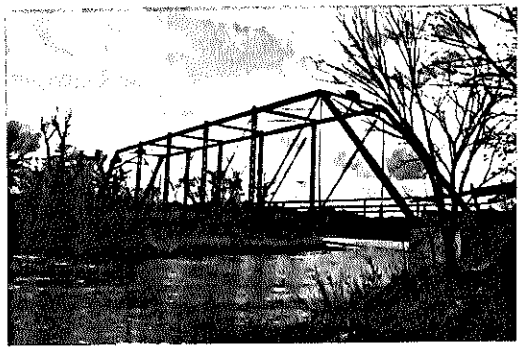
NAME(S) OF STRUCTURE
Borman Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C0E1605105; Cherry County Commissioners' Record, Book C: 21 April 1900 (page 371, 27 July 1915 (page 162), 18 February 1916 (page 209), 23 February 1916 (page 209), 29 February 1916 (page 210), 3 March 1916 (page 211) 15 March 1916 (page 213), 25 March 1916 (page 213), 9 September 1916 (page 245), 10 September 1918 (page 404), located at Cherry County Courthouse, Valentine, Nebraska; field inspection by Clayton Fraser, 25 April 1990.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Anderson Bridge [Galloway Bridge] CHER06
NDOR: C0E1631903P

DATE(S) OF CONSTRUCTION
1913

LOCATION
county road over the Niobrara River; S36, T33N, R31W
10.5 miles southeast of Kilgore; Cherry County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 45)

CONDITION
good

OWNER
Cherry County

span number: 1
span length: 100.0'
total length: 101.0'
roadway wdt.: 15.7'

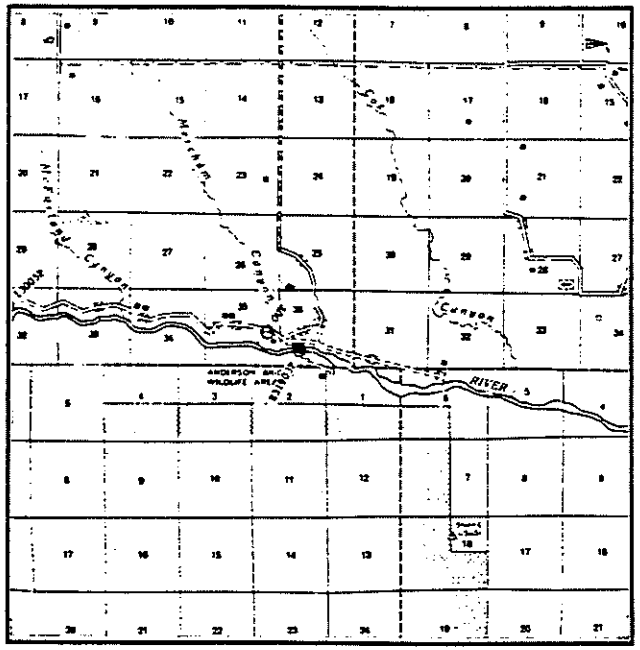
superstructure: steel, 6-panel, pin-connected Pratt through truss
substructure: concrete abutments and wingwalls (north); steel pile bent abutment (south)
floor/decking: timber deck
other features: upper chord: 2 channels with cover plate and lacing; lower chord: 2 rectangular eyebars; vertical: 2 channels with lacing; 2 angles with batten plates at hip connection; diagonal: 2 rectangular looped eyebars; 1 square looped eyebar with turnbuckle; lateral bracing: round bar; strut: 2 angles; floor beam: I-beam field bolted at vertical; guardrail: 2 angles; builder's plate; **1913 THE CANTON BRIDGE COMPANY BUILDERS CANTON OHIO;** decorative lacing at portal

This medium-span through truss carries an unpaved county road across the Niobrara River 10-1/2 miles southeast of Kilgore. Made up of steel components rolled in Pittsburgh by Cambria, it is comprised of a single, 100-foot pinned Pratt through truss. The truss was originally supported by steel cylinder piers, but after the 1916 flood along the Niobrara, concrete extensions were built over the original piers. The south concrete abutment has recently been replaced with a steel pile bent with sheet piling wingwalls. The Anderson Bridge was erected at this location in 1913 by the Canton Bridge Company of Canton, Ohio, as part of that company's annual contract with the county. Based on warrant records, it appears that this span was the only bridge of note erected by the county in 1913. It total cost was $3219. The substructure of the Anderson Bridge has been modified, but the truss itself remains intact.

The pinned Pratt through truss was the bridge of choice for medium-scale river crossings in Nebraska during the early 1900s. Of the fourteen Cherry County bridges surveyed on the Niobrara River, thirteen are medium-span Pratts. Due in part to the 1916 flood, these Niobrara River bridges represent the best-preserved group of county trusses in the state. The Anderson Bridge is historically significant as one of the few bridges that withstood the flood and for its representation of this transportation trend. It is technologically noteworthy as a well-documented example of a mainstay structural type.

NAME(S) OF STRUCTURE
Anderson Bridge [Galloway Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C0E1631903P; Cherry County Commissioners' Record, Book C: 11 February 1913 (page 62), 16 October 1913 (page 85), located at Cherry County Courthouse, Valentine, Nebraska; field inspection by Clayton Fraser, 25 April 1990.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Berry State Aid Bridge [Niobrara River Bridge] CHER07
NDOR: C0E1637705P

DATE(S) OF CONSTRUCTION
1920-21

LOCATION
county road over the Niobrara River; S22, T34N, R26W
10.0 miles northeast of Valentine; Cherry County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 44)

CONDITION

OWNER
Cherry County

span number:	1	superstructure:	steel, 8-panel, rigid-connected Pratt through truss
span length:	152.0'	substructure:	concrete abutments and wingwalls
total length:	153.0'	floor/decking:	asphalt and timber deck over steel stringers
roadway wdt.:	15.7'	other features:	upper chord: 2 channels with cover plates and lacing; lower chord: 2 channels with batten plates; vertical: 2 angles with batten plates; 4 angles with lacing; diagonal: 2 angles with batten plates; 4 angles with batten plates; lateral bracing: 1 angle; strut: 2 angles, braced; floor beam: I-beam field bolted to vertical; guardrail: 2 angles

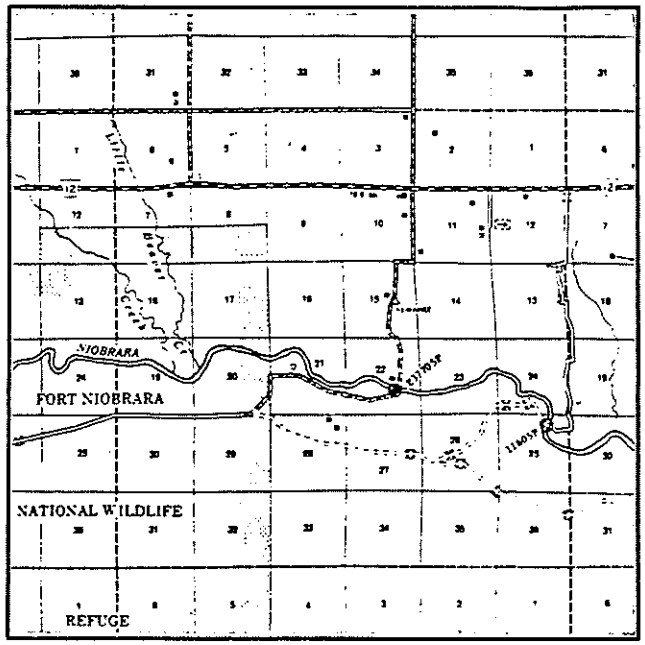
Built in 1899, the Berry Bridge ten miles northeast of Valentine was one of four spans left intact over the Niobrara River after the disastrous 1916 flood. After Cherry County reconstructed the last of the damaged spans in 1917, the commissioners approached the Nebraska State Engineer regarding state or federal aid to replace the existing truss. State aid was approved the following year, and at the end of December 1919, the county advertised for bids for a new 20-ton-capacity bridge - either a 120-foot or a 150-foot span - at this location. "The Berry Bridge is to be removed for the reason that the government will not accept it on a federal state aid road," the county clerk reported. Proposals were received in January from Allied Contractors, the Elkhart Bridge and Iron Company and the Pioneer Construction Company. Pioneer was the only bidder to submit bids for both spans lengths, and the Omaha -based company was awarded the construction contract for the 150-foot span for $50.60 per lineal foot. Despite damaging the truss during erection by a misplaced dynamite blast, Pioneer completed the Berry Bridge by June 1921. (The 1899 truss (**CHER12**) was moved to another location.) The Berry Bridge has had some recent substructural and bank protection work, but the truss remains structurally intact.

The Berry State Aid Bridge is historically significant as a regionally important crossing of the Niobrara River and as one of the few remaining state aid trusses in Nebraska.

NAME(S) OF STRUCTURE

Berry State Aid Bridge [Niobrara River Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C0E1637705P; field inspection by Clayton Fraser, 25 April 1990.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Rockford Bridge [Niobrara River Bridge] CHER08
NDOR: C001602605P

DATE(S) OF CONSTRUCTION
1909

LOCATION
county road over the Niobrara River; S22, T32N, R37W
7.6 miles southeast of Merriman; Cherry County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 43)

CONDITION
good

OWNER
Cherry County

span number: 1
span length: 84.0'
total length: 131.0'
roadway wdt.: 13.5'

superstructure: steel, 5-panel, pin-connected Pratt through truss with riveted Pratt pony truss approach
substructure: concrete/steel pile bent abutments; concrete wingwalls and steel cylinder piers
floor/decking: timber deck over timber stringers
other features: upper chord: 2 channels with cover plate and lacing; lower chord: 2 looped rectangular eyebars; vertical: 2 channels with lacing; diagonal: 2 looped rectangular eyebars; counter: 1 square eyebar with turnbuckle; lateral bracing: round bar with threaded ends; strut: 2 angles; floor beam: I-beam, field bolted to vertical; guardrail: timber; portal builder's plate: **1909 THE CANTON BRIDGE Co. BUILDERS CANTON OHIO**; decorative lacing at portal

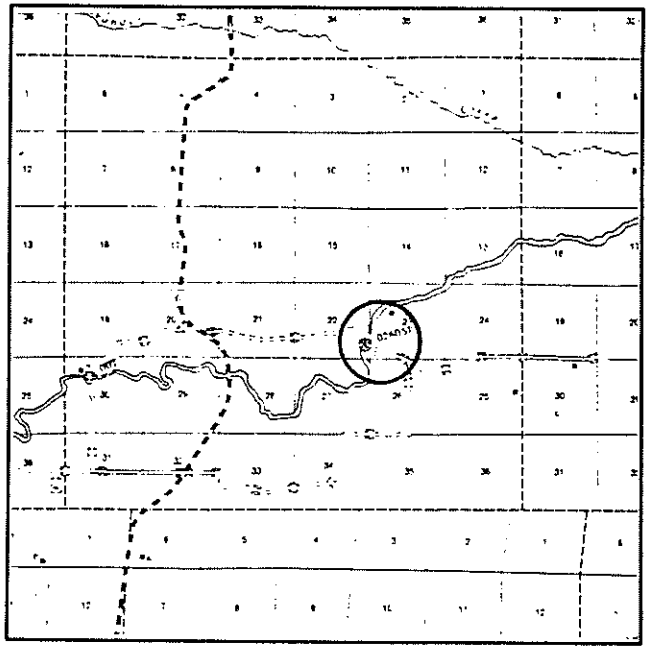
This short-span through truss carries an unpaved county road across the Niobrara River southeast of Merriman in central Cherry County. Made up of steel components rolled in Pittsburgh by Cambria, it was originally comprised of a single, 84-foot pinned Pratt through truss. After a flood on the river in 1933, a riveted Pratt pony truss approach span was added onto the south end of the main span, with the attendant substructural alterations. The Rockford Bridge was erected at this location in 1909 by the Canton Bridge Company of Canton, Ohio, as part of that company's annual contract with the county. It was one of two or three such structures built over the Niobrara that year. Although damaged by the 1916 flood, the Rockford Bridge was repaired and carried traffic until it was further damaged in a flood in 1933. Since the repairs at that time, the bridge has carried intermittent traffic in this sparsely settled region. The substructure of the Rockford Bridge has been modified by the recent replacement of the north abutment, but the truss itself remains intact.

The pinned Pratt through truss was the bridge of choice for medium-scale river crossings in Nebraska during the early 1900s. Of the fourteen Cherry County bridges surveyed on the Niobrara River (five of which were erected in 1916), thirteen are medium-span Pratts. These Niobrara River bridges represent the best-preserved group of county trusses in the state. The Rockford Bridge is historically significant for its association with the 1916 flood and for its representation of this transportation trend. It is technologically noteworthy as a well-documented example of a mainstay structural type.

NAME(S) OF STRUCTURE

Rockford Bridge [Niobrara River Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP

TAKEN FROM NEBRASKA DEPARTMENT OF ROADS GENERAL HIGHWAY MAP

SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C01602605P; Cherry County Commissioners' Record, Book C: 25 June 1909 (page 420), 2 August 1909 (page 429), 2 September 1909 (page 435), 27 July 1915 (page 162), 18 February 1916 (page 209), 23 February 1916 (page 209), 29 February 1916 (page 210), 3 March 1916 (page 211) 24 March 1916 (page 213), 9 September 1916 (page 245), 10 September 1918 (page 404), located at Cherry County Courthouse, Valentine, Nebraska; field inspection by Clayton Fraser, 25 April 1990.

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Galloway Bridge [Niobrara River Bridge] CHER09
NDOR: C001608705P

DATE(S) OF CONSTRUCTION
1916

LOCATION
county road over the Niobrara River; S28, T33N, R33W
9.0 miles southeast of Cody; Cherry County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 45)

CONDITION
good

OWNER
Cherry County

span number: 1
span length: 98.0'
total length: 100.0'
roadway wdt.: 13.1'

superstructure: steel, 6-panel, pin-connected Pratt through truss
substructure: concrete abutment and wingwalls (north); steel pile bent and sheet steel piling (south)
floor/decking: timber deck over steel stringers
other features: upper chord: 2 channels with cover plate and lacing; lower chord: 2 rectangular looped eyebars; vertical: 2 channels with lacing; diagonal: 2 rectangular looped eyebars; 1 square looped eyebar with turnbuckle; lateral bracing: round bar; strut: 2 angles; floor beam: I-beam field bolted to vertical; guardrail: 2 angles; builder's plate: **1916 THE CANTON BRIDGE Co. BUILDERS CANTON OHIO**; decorative lacing at portal

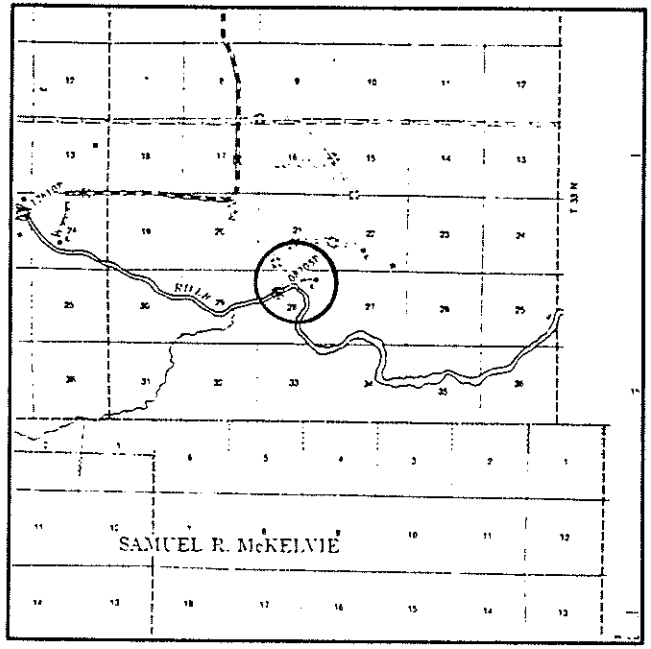
After the moving winter ice pack destroyed or damaged some 21 Niobrara River bridges in Cherry County in February 1916, the county commissioners declared an emergency and established a special fund to pay for the extensive repair and reconstruction. They visited the wrecked bridges in mid-March and, after conferring with a representative from the Canton Bridge Company, ordered Canton to repair or replace eight of the damaged structures. Included among these was the Galloway Bridge, located over the Niobrara nine miles southeast of Cody. Using steel rolled in Pittsburgh by Cambria, Canton erected this pinned Pratt through truss later that year. The Galloway Bridge has carried light traffic since in this sparsely settled region, with the replacement of its south abutment as the only alteration of note.

The pinned Pratt through truss was the bridge of choice for medium-scale river crossings in Nebraska during the early 1900s, as the Cherry County Commissioners discovered in 1916. Of the fourteen Cherry County bridges surveyed on the Niobrara River (five of which were erected in 1916), thirteen are medium-span Pratts. Due in part to this natural calamity and the lack of population, these Niobrara River bridges represent the best-preserved group of county trusses in the state. The Galloway Bridge is historically significant for its association with the 1916 flood and for its representation of this transportation trend. It is technologically noteworthy as a well-documented example of a mainstay structural type in Cherry County and Nebraska.

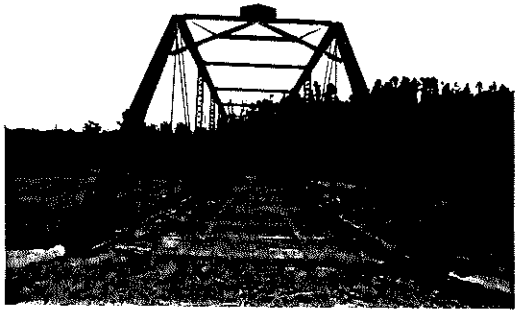
NAME(S) OF STRUCTURE

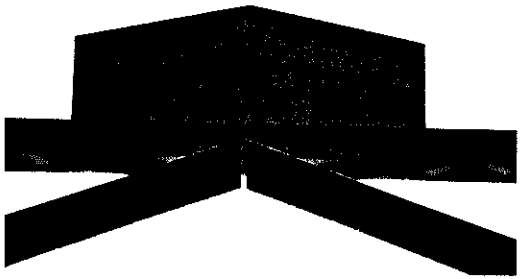
Galloway Bridge [Niobrara River Bridge]

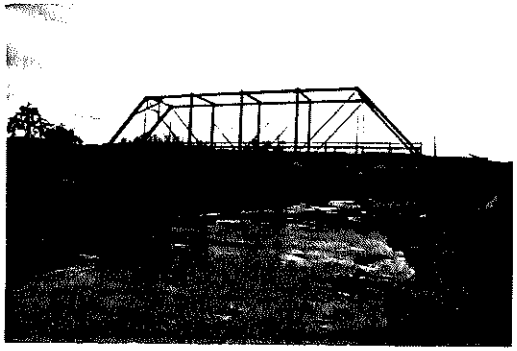
PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP







SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001608705P; Cherry County Commissioners' Record, Book C: 27 July 1915 (page 162), 18 February 1916 (page 209), 23 February 1916 (page 209), 29 February 1916 (page 210), 3 March 1916 (page 211) 24 March 1916 (page 213), 9 September 1916 (page 245), 10 September 1918 (page 404), located at Cherry County Courthouse, Valentine, Nebraska; field inspection by Clayton Fraser, 25 April 1990.

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bell Bridge [Allen Bridge; Niobrara River Bridge] CHER10
NDOR: C001611605P

DATE(S) OF CONSTRUCTION
1903

LOCATION
county road over the Niobrara River; S25, T34N, R26W
11.9 miles northeast of Valentine; Cherry County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 54)

CONDITION
good

OWNER
Cherry County

span number:	1	superstructure:	steel, 8-panel, pin-connected Pratt through truss with timber stringer approach spans
span length:	147.0'	substructure:	stone and timber abutments with concrete-filled steel cylinder piers
total length:	188.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	13.8'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 looped rectangular eyebars; vertical: 2 channels with lacing; 1 square looped eyebar; diagonal: 2 rectangular lopped eyebars; lateral bracing: round bar; strut: 2 angles; floor beam: I-beam field bolted to vertical; guardrail: timber; bridge plate: **ALLEN BR.**; portal-mounted builder's plate: **1903 THE CANTON BRIDGE CO. BUILDERS CANTON OHIO**

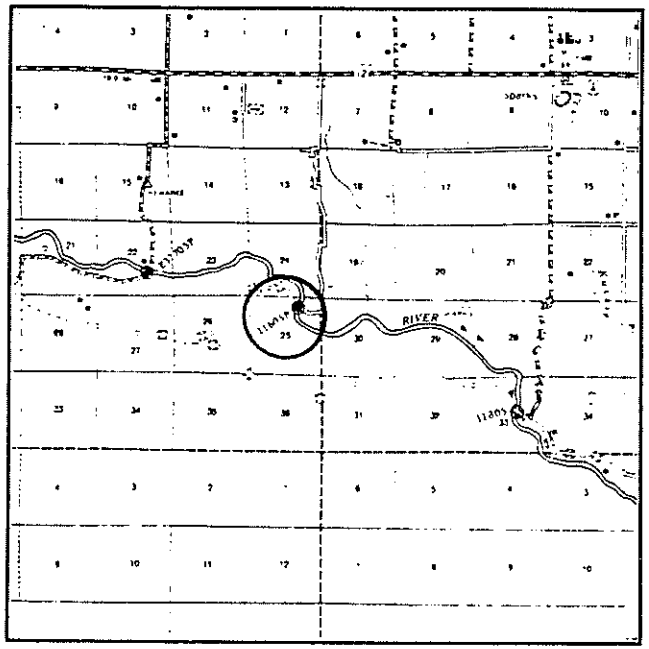
The Cherry County Commissioners began considering construction of a bridge at the Bell crossing of the Niobrara River when they visited the site in January 1902. Located twelve miles northeast of Valentine, the crossing was situated about midway between the existing Berry and Brewer bridges. The commissioners deferred action until the following March, however, when they received a petition from C.F. Callen for a new iron span here. After visiting the site on March 18th, the commissioners granted the petition and ordered a pinned through truss from the Canton Bridge Company of Canton, Ohio. A Canton crew began the excavations for the abutments soon thereafter and, using steel rolled by Cambria, had completed the erection of this medium-span truss by November. Total cost: $5019.36. Later called the Allen Bridge, the truss was one of four in the county standing intact after the February 1916 flood. It has carried vehicular traffic since, and has retained an excellent degree of physical integrity.

As one of the oldest, longest and best-preserved of Cherry County's remarkable group of through trusses, the Bell Bridge is an excellent example of what was once a mainstay vehicular truss type: the pinned Pratt through truss. It has functioned historically as an important crossing of the Niobrara River and is today distinguished as one of the handful of pre-1916 trusses remaining intact in the county and one of the oldest intact through trusses in Nebraska.

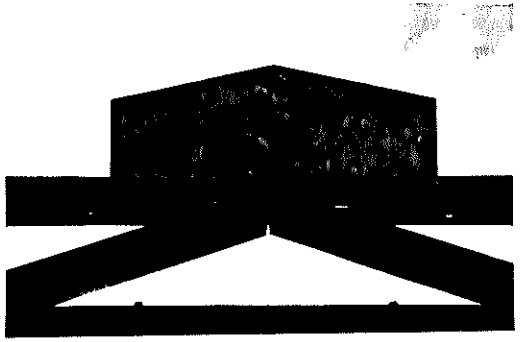
NAME(S) OF STRUCTURE

Bell Bridge [Allen Bridge; Niobrara River Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001611605P; Cherry County Commissioners' Record, Book C: 18 March 1903 (page 69), 27 November 1903 (page 98), 20 June 1904 (page 129), 27 July 1915 (page 162), 18 February 1916 (page 209), 23 February 1916 (page 209), 29 February 1916 (page 210), 3 March 1916 (page 211) 24 March 1916 (page 213), 9 September 1916 (page 245), 10 September 1918 (page 404), located at Cherry County Courthouse, Valentine, Nebraska; field inspection by Clayton Fraser, 25 April 1990.

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Brewer Bridge [Niobrara River Bridge] CHER11
NDOR: C001611805

DATE(S) OF CONSTRUCTION
1899; moved 1921

LOCATION
county road over the Niobrara River; S33, T34N, R25W
14.7 miles east of Valentine; Cherry County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 49)

CONDITION
good

OWNER
Cherry County

span number:	1	superstructure:	steel, 8-panel, pin-connected Pratt through truss
span length:	150.0'	substructure:	concrete abutments and wingwalls
total length:	152.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	14.0'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 looped rectangular eyebars; vertical: 2 channels with lacing, 1 square looped eyebar with 2-pronged lower chord eyes; diagonal: 2 square looped eyebars; counter: 2 round eyebars with turnbuckles; lateral bracing: round bar with turnbuckles; strut: 2 channels with spacers; floor beam: I-beam, U-bolted to lower chord pin at vertical; guardrail: welded steel pipe

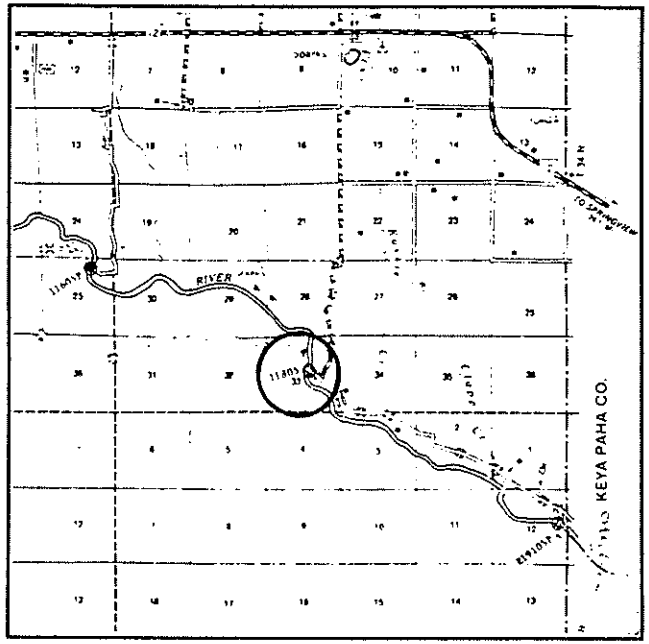
In November 1898 the Cherry County Commissioners received a complaint about the deteriorated condition of the Berry Bridge over the Niobrara River, located about fifteen miles east of Valentine, the county seat. They met in special session at the bridge site and condemned the existing structure as unsafe. In January 1899, the county advertised for competitive bids for a new 150-foot steel truss, to be supported by new steel cylinder piers. Two months later, proposals were received from a dozen major regional bridge contractors. Submitting no less than six different plans that ranged in cost from $3790 to $5970, the Wrought Iron Bridge Company of Canton, Ohio, received the contract for $4580. A WIBCo crew began work on the structure that spring, completing it by early October. The Berry Bridge was one of four trusses over the Niobrara River in Cherry County that survived the 1916 flood intact, due in large part because its abutments had been extended in 1904, raising the bridge higher over the river. In 1919, however, the county began considering its replacement, because, according to the clerk, "the government will not accept it on a federal state aid road." A new 150-foot truss was completed in June 1921, and the county moved the 1899 truss to the site of the old Brewer Bridge (one of the casualties of the 1916 flood) some seven miles east. The Pioneer Construction Company of Omaha, contractor for the new Berry State Aid Bridge (**CHER07**), moved the truss to the new site, where it has carried vehicular traffic to the present in unaltered condition.

The Wrought Iron Bridge Company was one of the two largest vehicular bridge erectors in the country during the late 1900s, rivaling the giant King Iron Bridge Company in its nationwide trade. Though not as active in Nebraska as King, WIBCo did erect spans in the southeast part of the state and in Cherry County. Few WIBCo trusses are known to have survived in the state, however. The Ohio-based contractor maintained an extensive catalog of steel and iron spans, ranging from the standard to the esoteric. With its pinned Pratt configuration, the Brewer Bridge represents the former more than the latter. It is technologically significant as one of the oldest remaining vehicular trusses in the state. The Brewer Bridge is historically significant as the oldest remaining of Cherry County's remarkable group of through trusses.

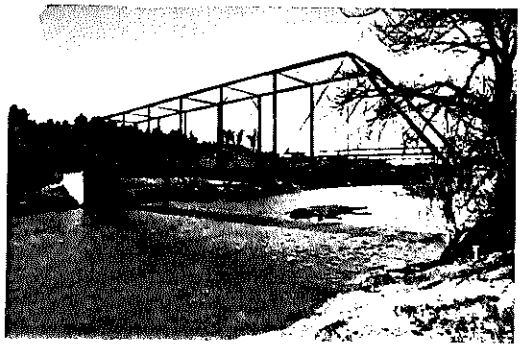
NAME(S) OF STRUCTURE

Brewer Bridge [Niobrara River Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001611805; Cherry County Commissioners' Record, Book B: 9 November 1898 (page 268), 10 January 1899 (page 289), 21 March 1899 (page 297), 3 October 1899 (page 332); Book C: 30 July 1904 (page 129), 25 July 1915 (page 162), 18 February 1916 (page 209), 23 February 1916 (page 209), 29 February 1916 (page 210), 29 December 1919 (page 495), 30 January 1920 (page 504), 18 June 1920 (page 522), 17 August 1920 (page 525), 17 September 1920 (page 531), 15 January 1921 (page 558), 18 January 1921 (page 558), 15 February 1921 (page 562), 30 March 1921 (page 573), 17 June 1921 (page 581), 20 June 1921 (page 581), 21 June 1921 (page 582) located at Cherry County Courthouse, Valentine, Nebraska; M.F. Black, Nebraska Bureau of Roads and Bridges Division #2 Engineer, to Cherry County, correspondence, January 1920, located at Cherry County Courthouse, Valentine, Nebraska; field inspection by Clayton Fraser, 25 April 1990.

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Boiling Springs Bridge [Niobrara River Bridge] CHER12
NDOR: C001657705P

DATE(S) OF CONSTRUCTION
1912

LOCATION
county road over the Niobrara River; S9, T33N, R34W
7.3 miles northeast of Cody; Cherry County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 43)

CONDITION
good

OWNER
Cherry County

span number:	1	superstructure:	steel, 5-panel, pin-connected Pratt through truss
span length:	90.0'	substructure:	concrete abutment and wingwall (north); steel pile bent abutment with steel piling (south)
total length:	92.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	14.0'	other features:	upper chord: 2 channels with cover plate and lacing: lower chord: 2 rectangular looped eyebars; vertical: 2 channels with lacing; diagonal: 2 rectangular looped eyebars; 1 square looped eyebar with turnbuckle; lateral bracing: round bar; strut: 2 angles; floor beam: I-beam, field bolted to vertical; guardrail: 2 angles; portal-mounted builder's plate: **1912 THE CANTON BRIDGE Co. BUILDERS CANTON OHIO**: decorative lacing at portal

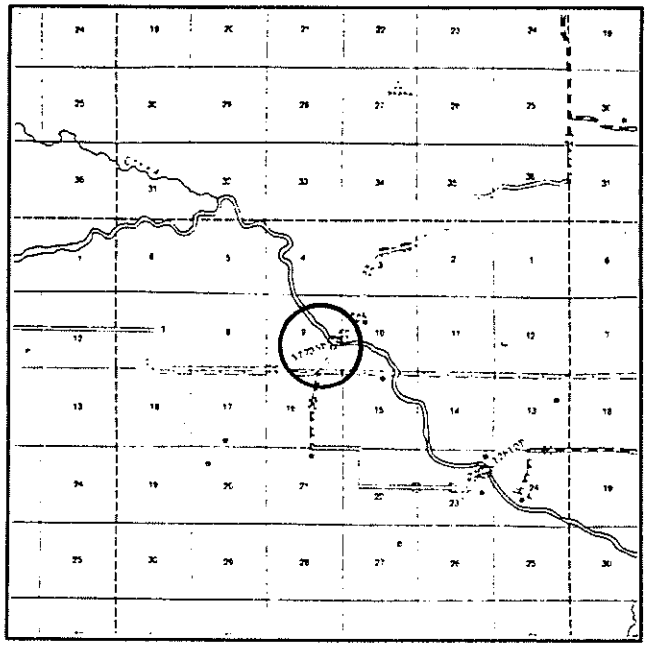
The Boiling Springs Bridge carries an unpaved county road over the Niobrara River northeast of Cody in central Cherry County. It consists of a single pinned Pratt through truss, supported by its original concrete abutments on the south end and a recently installed steel pile bent on the north. The truss was fabricated and erected by the Canton Bridge Company of Canton OH as part of that company's annual bridge construction contract with Cherry County in 1912. Although damaged in the February 1916 flood, the Boiling Springs Bridge was repaired and put back into service later that year. It carried traffic in unaltered condition in this relatively remote location, until the recent replacement of its original concrete north abutment with a steel pile bent.

The pinned Pratt through truss was the bridge of choice for medium-scale river crossings in Nebraska during the early 1900s. Of the fourteen Cherry County bridges surveyed on the Niobrara River (five of which were erected in 1916), thirteen are medium-span Pratts. These Niobrara River bridges represent the best-preserved group of county trusses in the state. The Boiling Springs Bridge is historically significant as one of the few pre-1916 bridges remaining in the county and for its representation of this transportation trend. It is technologically noteworthy as a well-documented example of a mainstay structural type.

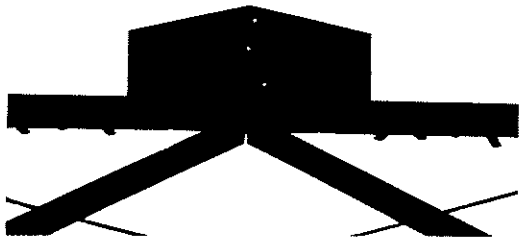
NAME(S) OF STRUCTURE

Boiling Springs Bridge [Niobrara River Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001657705P; Cherry County Commissioners' Record, Book C: 27 July 1915 (page 162), 18 February 1916 (page 209), 23 February 1916 (page 209), 29 February 1916 (page 210), 3 March 1916 (page 211) 24 March 1916 (page 213), 9 September 1916 (page 245), 10 September 1918 (page 404), located at Cherry County Courthouse, Valentine, Nebraska; field inspection by Clayton Fraser, 25 April 1990.

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bryan Bridge [Valentine Bridge; Niobrara River Bridge] CHER13
NDOR: S020 19981

DATE(S) OF CONSTRUCTION
1931-32

LOCATION
U.S. Highway 20/83 over the Niobrara River; S17, T33N, R27W
3.3 miles southeast of Valentine; Cherry County, Nebraska

USE (ORIGINAL / CURRENT)
highway bridge / highway bridge

RATING NRHP listed (score: 71)

CONDITION
excellent

OWNER
Nebraska Department of Roads

span number:	3	superstructure:	steel, rigid-connected Pratt deck truss
span length:	145.0'	substructure:	concrete abutments, wingwalls and piers
total length:	290.0'	floor/decking:	asphalt covered concrete over steel stringers
roadway wdt.:	23.8'	other features:	upper and lower chords: 2 channels with double lacing; vertical and diagonal: wide flange; floor beam: I-beam, rigid-connected to vertical; lateral bracing: 2 angled with batten plates; commemorative highway department and ASCI plates at north abutment.

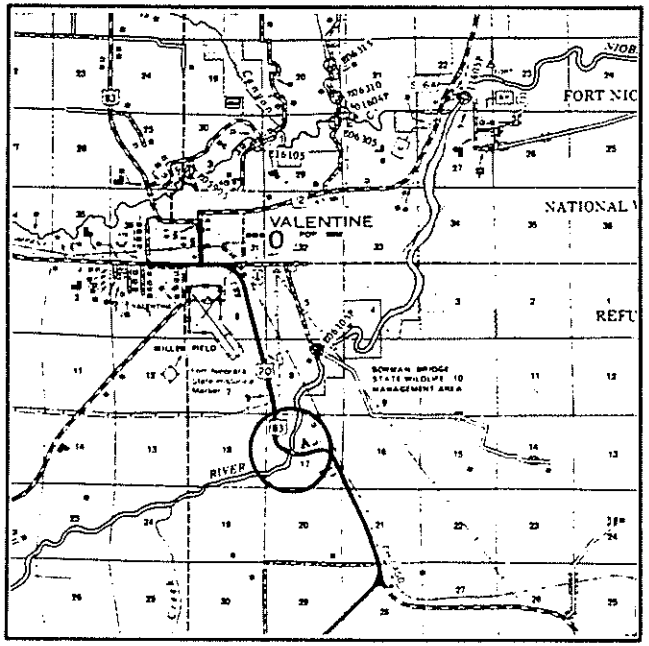
When engineers for the Nebraska Bureau of Roads and Bridge began considering the design of a new bridge to carry U.S. Highways 20/83 over the Niobrara River in 1931, they first considered a 160-foot through truss with deck girder approaches or a 300-foot continuous truss. But they eventually scrapped these designs in favor of a 290-foot arched cantilever deck truss. "Since it was considered that any structure of ordinary appearance would mar the natural beauty of the banks and immediate surroundings the arched cantilever spans were adopted in spite of he slightly greater cost," highway department engineer Josef Sorkin explained in 1934. Named in honor of Nebraska Governor Charles W. Bryan, the proposed structure consisted of a single 145-foot arched span over the river, flanked on both sides by symmetrical anchor spans and supported by dumbbell-shaped concrete pedestals. A contract to build the bridge was awarded late in 1931 to the Yant Construction Company of Omaha under Project No. 317-C. Using steel rolled by the Illinois Steel Company and fabricated by the Paxton and Vierling Iron Works in Omaha, the contractor completed the bridge the next year. Since its dedication in September 1932, the Bryan Bridge has carried traffic in this lightly trafficked highway, without substantial modification.

"Aesthetic treatment of Nebraska bridges is seldom economically justifiable due to the alluvial character of the streams - typically wide and shallow," Josef Sorkin wrote in 1934. "The comparative costs of substructures is so small that only in very rare instances spans beyond 60 feet in length are acceptable from the point of view of cost. For such limited span lengths the steel deck girder type is most useful. While everything is being done to make such bridges as sightly as possible, spectacular achievements of merit are obviously limited." With its steep banks and beautiful streambed, the Niobrara River at this crossing lent itself well to a dramatic structural statement, and the Nebraska highway department took full advantage of this rare opportunity to flex its engineering muscles. Perhaps the most handsome highway bridge in the state, the Bryan Bridge won an award as the most beautiful structure in its class from the American Institute of Steel Construction in 1932. Although it did little to contribute to bridge development in Nebraska, the Bryan Bridge is significant as a singular exercise in highway bridge aesthetics in the state. In recognition of this, it has been individually listed on the National Register.

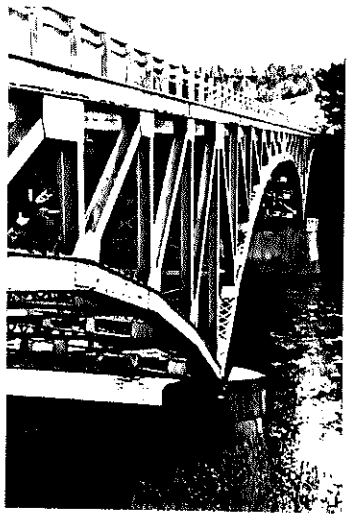
NAME(S) OF STRUCTURE

Bryan Bridge [Valentine Bridge; Niobrara River Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number S020 19981; Josef Sorkin and John G. Mason, "Bryan Bridge Adjudged Most Beautiful Bridge," **Nebraska Blueprint**, February 1934, pages 97-99; Nebraska Department of Public Works, **Nineteenth Biennial Report**, 1931-32, pages 77, 87, 99; field inspection by Clayton Fraser, 25 April 1990.

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Adamson Bridge [Niobrara River Bridge] CHER14
NDOR: S097 13350

DATE(S) OF CONSTRUCTION
1916

LOCATION
State Highway 97 over the Niobrara River; S25, T33N, R29W
7.8 miles southwest of Valentine; Cherry County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / highway bridge

RATING potentially NRHP eligible (score: 47)

CONDITION
good

OWNER
Nebraska Department of Roads

span number:	6	superstructure:	timber stringer trestle
span length:	31.0'	substructure:	timber pile back- and wingwalls with timber pile piers
total length:	188.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	23.6'	other features:	Armco guardrail

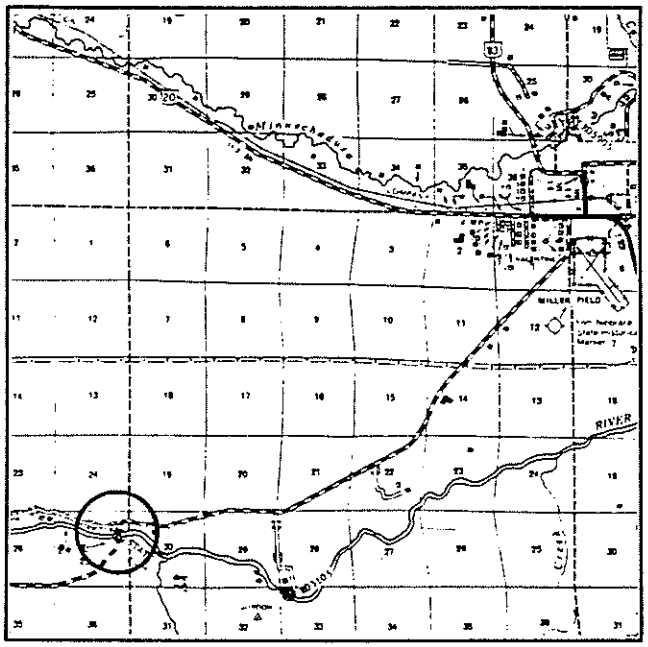
After the moving winter ice pack destroyed or damaged some 21 Niobrara River bridges in Cherry County in February 1916, the county commissioners declared an emergency and established a special fund to pay for the extensive repair and reconstruction. One of the bridges wrecked by the flood was the Adamson Bridge, a 100-foot steel truss erected in 1910-11 by the Canton Bridge Company. Located near the Tioga Post Office southwest of Valentine, this structure was the first visited by the commissioners on February 29th. After conferring with a representative from the Canton Bridge Company, they ordered the contractor to build a new timber structure approximately 200 feet downriver from the previous span here. The timber stringer structure that stands today is apparently the same bridge that Canton built that year. Although it seems improbable that the existing structure dates from 1916 (wood construction typically falls prey to deterioration from a variety of sources), neither county nor state records give any indication that a new bridge was ever built to replace the 1916 span. The roadway has been widened by adding steel piles and timber stringers on the west side, the guardrails have been replaced with Armco and the timber deck has been thinly coated with asphalt, but the Adamson Bridge remains otherwise intact, with a high degree of physical integrity.

Although Nebraska's counties used timber extensively for bridge construction in the early 1900s, nearly all of these simple pile bridges have since been replaced, due in large part to the impermanent nature of wood. The Adamson Bridge is a notable exception. Because of the relatively light traffic it carries, it has apparently survived with only minor structural alterations. The Adamson Bridge is technologically significant as one of the few remaining examples in the state of early timber bridge construction. It is historically significant in Cherry County for its association with the disastrous 1916 flood and the extensive bridge replacement program that followed.

NAME(S) OF STRUCTURE

Adamson Bridge [Niobrara River Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
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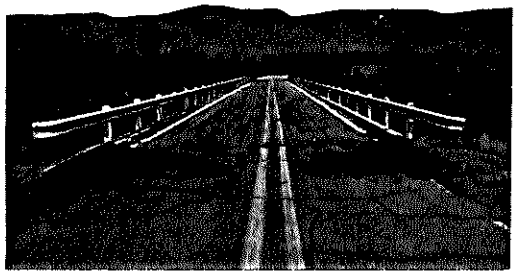
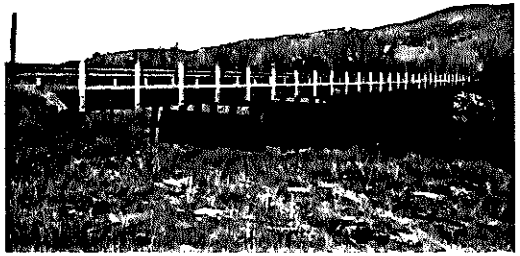
GENERAL HIGHWAY MAP





SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number S097 13350; Cherry County Commissioners' Record, Book C: 26 March 1910 (page 490), 26 April 1910 (page 495), 3 January 1911 (page 540), 7 March 1911 (page 577), 23 February 1916 (page 209), 29 February 1916 (page 210), 3 March 1916 (page 211) 24 March 1916 (page 213), 25 March 1916 (page 213), 4 January 1917 (page 323), 10 September 1918 (page 404), located at Cherry County Courthouse, Valentine, Nebraska; field inspection by Clayton Fraser, 25 April 1990.

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
County Line Bridge [Niobrara River Bridge] CHER15
NDOR: none

DATE(S) OF CONSTRUCTION
1916

LOCATION
private road over the Niobrara River; S12, T33N, R25W
17.5 miles east of Valentine; Cherry County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / closed

RATING potentially NRHP eligible (score: 44)

CONDITION
good

OWNER
private

span number: 1
span length: 120.0'
(west)
total length: 120.0'
roadway wdt.: 14.0'

superstructure: steel, 7-panel, pin-connected Pratt through truss
substructure: concrete abutment extended from steel cylinders (east); steel pile bents with sheet piling
floor/decking: timber deck over steel stringers
other features: upper chord: 2 channels with cover plate and lacing; lower chord: 2 rectangular looped eyebars; vertical: 2 channels with lacing, 1 looped square looped eyebar at hip; diagonal: 2 rectangular looped eyebars; counter: 1 square looped eyebar with turnbuckle; lateral bracing: round bar with threaded ends; strut: 2 angles; floor beam: I-beam, field bolted to vertical: guardrail: 2 angles; Canton Bridge Company builder's plate removed

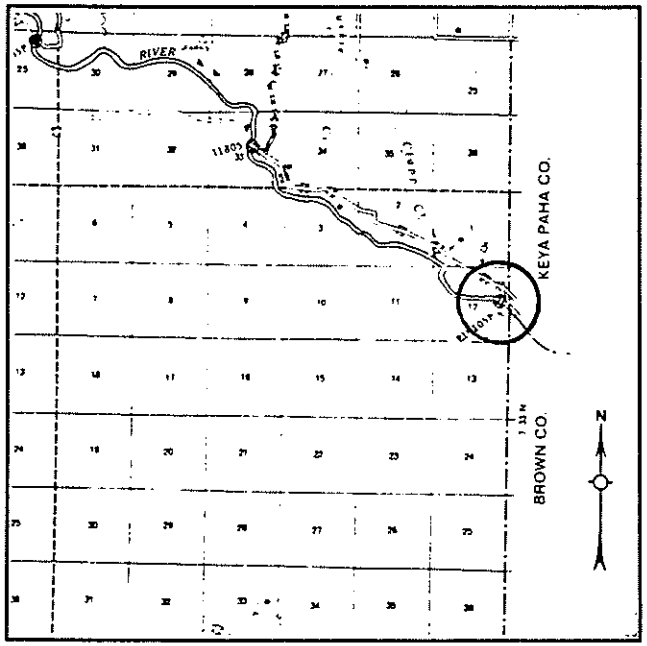
On February 16, 1916, the winter ice on the Niobrara River near the western edge of Cherry County began to break up as the river's level rose quickly. The flood that resulted moved downstream, pushing the ice pack in front of it and "virtually eating away the thick ice and destroying the county bridges," lamented the Cherry County Clerk. Before it passed by the County Line Bridge on the county's eastern edge two days later, the flood had swept fourteen bridges away and damaged or destroyed seven others. Only four bridges over the Niobrara remained passable. In the aftermath of the flood, the commissioners declared an emergency on February 29th and established a special fund to pay for the extensive repair and reconstruction. A representative from the Canton Bridge Company, which had held the county's annual bridge contract for 1915, conferred with the commissioners and assured them that work by his firm to rebuild several of the bridges would not constitute an annual contract. On March 20th, the commissioners met with the Canton official at the site of the County Line Bridge, one of the casualties of the flood, and later that month they ordered a new 120-foot truss, to be installed on the extended piers of the earlier bridge. Using steel rolled by Cambria, Canton erected this Pratt through truss later that year. The County Line Bridge has carried light traffic since in this sparsely settled region, with the replacement of its original concrete west abutment as the only alteration of note. It has recently been sold by the county to the adjacent landowner and is now closed.

The pinned Pratt through truss was the bridge of choice for medium-scale river crossings in Nebraska during the early 1900s, as the Cherry County Commissioners discovered in 1916. Of the fourteen Cherry County bridges surveyed on the Niobrara River (five of which were erected in 1916), thirteen are medium-span Pratts. Due in part to this natural calamity, these Niobrara River bridges represent the best-preserved group of county trusses in the state. The County Line Bridge is historically significant for its association with the 1916 flood and for its representation of this transportation trend. It is technologically noteworthy as a well-documented example of a mainstay structural type.

NAME(S) OF STRUCTURE

County Line Bridge [Niobrara River Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES

Cherry County Commissioners' Record, Book C: 27 July 1915 (page 162), 18 February 1916 (page 209), 23 February 1916 (page 209), 29 February 1916 (page 210), 3 March 1916 (page 211) 24 March 1916 (page 213), 9 September 1916 (page 245), 10 September 1918 (page 404), located at Cherry County Courthouse, Valentine, Nebraska; field inspection by Clayton Fraser, 25 April 1990.

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Case Bridge [Niobrara River Bridge] CHER16
NDOR: none

DATE(S) OF CONSTRUCTION
1906; moved 1910

LOCATION
county road / private road over the Niobrara River; S32, T32N, R40W
23.3 miles southwest of Merriman; Cherry County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / private bridge

RATING potentially NRHP eligible (score: 46)

CONDITION
fair

OWNER
private

span number: 2
span length: 60.0'
total length: 130.0'
roadway wdt.: 14.0'

superstructure: steel, 3- and 4-panel, pinned Pratt half-hip pony trusses, with timber stringer approach
substructure: steel pile bent abutments with timber back- and wingwalls (new) and steel cylinder piers
floor/decking: timber deck over timber stringers
other features: upper chord: 2 channels with cover plate and lacing; lower chord: 2 looped rectangular eyebars; vertical: 4 angles with double lacing; diagonal: 2 looped square eyebars; 1 round eyebar with turnbuckle; lateral bracing: round bar; floor beam: I-beam field bolted to vertical; guardrail: timber

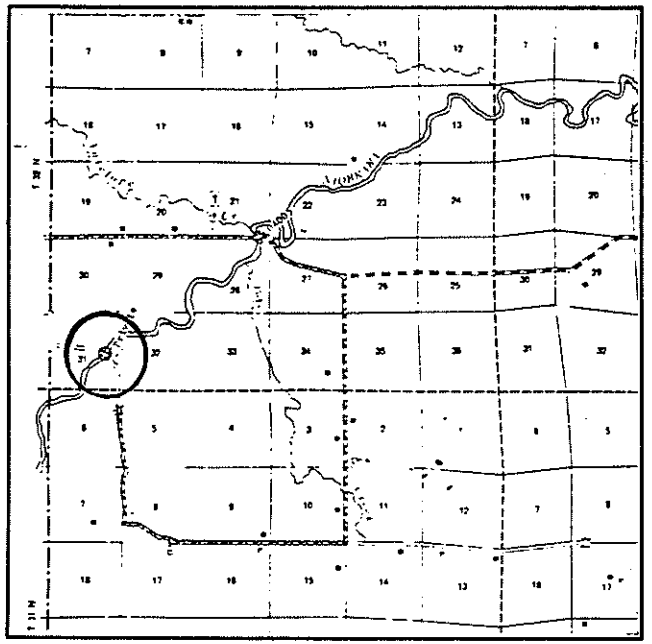
In July 1906, the Cherry County Commissioners advertised for competitive bids to construct two bridges overt he Niobrara River: a 90-foot truss at the mouth of the Snake River and a 60-foot span at the Lavaca crossing in the western part of the county. Later that summer they awarded the construction contract for the Lavaca bridge to the Canton Bridge Company of Canton, Ohio. In mid-October 1906, Arthur Bowring was sent to the site to "take measurements for substructure or tubing," indicating that construction had not yet begun. Presumably, work commenced soon thereafter, and the bridge was probably completed later that year. In the wake of flooding on the Niobrara in March 1910, the county solicited proposals to build a bridge at the Case crossing near the county's west edge. They rejected all the bids as too high, however. Rather than re-bid the project, the commissioners instead declared an emergency and ordered Canton to dismantle the Lavaca Bridge and move it to the Case site, placing the pony truss on new steel cylinder piers. At some later date, perhaps after floods in 1916 and 1933, an additional 50-foot pony truss was added to the south end of the existing span. Based on its detailing, this latter span appears to have been fabricated ca.1900 by Canton and salvaged from another bridge. Since the addition of this second span, the Case Bridge has carried intermittent traffic in this sparsely settled corner of the county. It has been sold by the county to the adjacent landowner and now functions as a private bridge.

The Case Bridge is the only pony truss among the well-preserved group of Niobrara River bridges in Cherry County. Its integrity has been compromised to a degree by the moving of the trusses, but this action occurred long enough in the past to have acquired a historical patina of its own. The bridge is distinguished as one of the older examples remaining in Nebraska of this exceedingly common structural type.

NAME(S) OF STRUCTURE

Case Bridge [Niobrara River Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES

Cherry County Commissioners' Record, Book B: 27 July 1915 (page 162), 18 February 1916 (page 209), 23 February 1916 (page 209), 29 February 1916 (page 210), 3 March 1916 (page 211) 24 March 1916 (page 213), 9 September 1916 (page 245), 10 September 1918 (page 404), located at Cherry County Courthouse, Valentine, Nebraska; field inspection by Clayton Fraser, 25 April 1990.

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Brownson Viaduct [State Spur 17A Overpass] CHEY01
NDOR: SS17A00030

DATE(S) OF CONSTRUCTION
1942

LOCATION
State Spur 17A over U.S. Highway 30/Union Pacific Railroad; S13, T14N, R51W
0.8 mile northwest of Brownson; Cheyenne County, Nebraska

USE (ORIGINAL / CURRENT)
highway overpass / highway overpass

RATING potentially NRHP eligible (score: 47)

CONDITION
excellent

OWNER
Nebraska Department of Roads

span number:	13	superstructure:	timber stringer trestle
span length:	33.0'	substructure:	timber pile bent abutments and piers on concrete pedestals
total length:	352.0'	floor/decking:	asphalt over laminated wood deck with timber stringers
roadway wdt.:	23.0'	other features:	timber guardrail

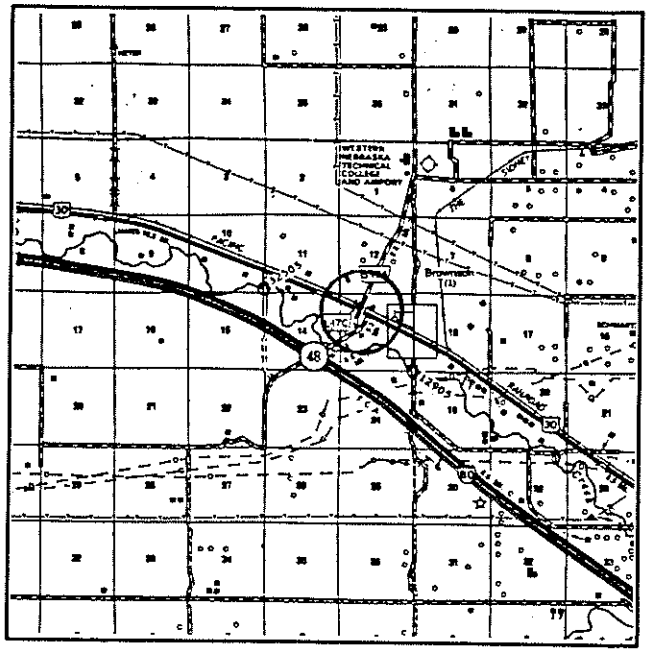
Located less than a mile northwest of the small town of Brownson, this multiple-span timber trestle carries State Spur 17A over U.S. Highway 30 and mainline tracks of the Union Pacific Railroad. The structure was designed by Nebraska's Department of Roads and Irrigation to provide access to the Sioux Ordnance Plant in June 1942, in the midst of World War II. Its construction was immediately advertised for bids under Project No. DA-WI-2(1), and on June 25, 1942, a contract was awarded to the Bushman Construction Company of Saint Joseph, Missouri (cost: $30,927.45). In the months prior to the bridge's construction, the American Association of State Highway Officials, Committee on Standards, in conjunction with the War Department, had developed a "Priorities Critical List" regarding materials deemed essential to the war effort. The Brownson Viaduct indicated this effort to save critical materials, most notably steel, and was built as a 13-span, treated timber trestle with an overall length of 352 feet. Other than the steel fasteners and concrete pedestals for the piers and abutments, the structure was built entirely of wood, including a laminated wood deck (which has subsequently been paved with asphalt). Since its completion in the fall of 1942, the overpass has carried vehicular traffic, with paving of the deck with asphalt as the only alteration of note.

"The defense activities, the declaration of war, the construction of Army and Navy ordnance plants, air bases, satellite airfields, and other defense plants brought about a decided change in the highway program for the past two years," the Bureau of Highways reported in 1942. The Defense Highway Act of 1941 directed construction of access roads to defense plants, and the Priorities Critical List directed the use of materials in highway construction. The planning and design of the Brownson Viaduct reflected both of these national trends. Built of timber by a highway department that normally eschewed timber construction, it is significant for its association with wartime transportation work in Nebraska and as one of the few timber stringer structures included in the statewide inventory.

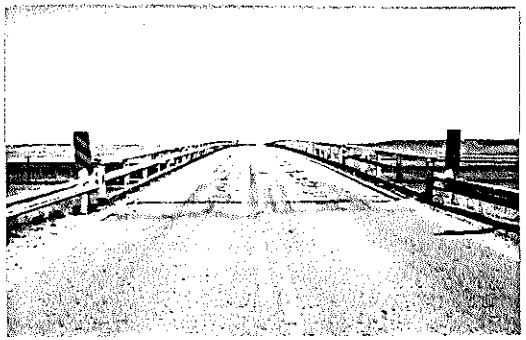
NAME(S) OF STRUCTURE

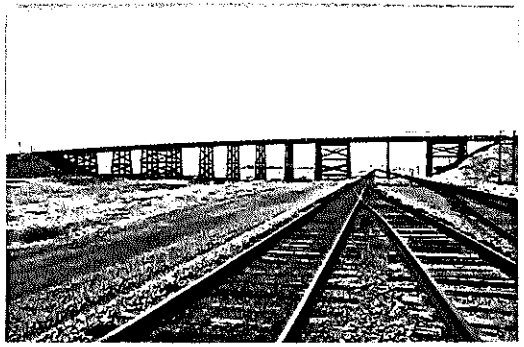
Brownson Viaduct [State Spur 17A Overpass]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number SS17A00030; **Twenty-Fourth Biennial Report of the Department of Roads and Irrigation,** Volume I, 1941-1942, pp. 6, 72, 113-114; Drawings for "351' 4 3/4" Treated Timber Viaduct Cheyenne County" produced by the State of Nebraska's Department of Roads and Irrigation, Bureau of Highways, 5 June 1942; field inspection by Clayton Fraser, 2 May 1989.

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Korgan Bridge [Big Blue River Bridge] CLAY01
NDOR: C001801010

DATE(S) OF CONSTRUCTION
1915

LOCATION
county road over West Fork of Big Blue River; S22/27, T8N, R8W
1 mile north, 5.6 miles west of Harvard; Clay County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 35)

CONDITION
good

OWNER
Clay County

span number:	1	superstructure:	concrete filled spandrel arch
span length:	35.0'	substructure:	concrete abutments and flared, sloped wingwalls
total length:	38.0'	floor/decking:	concrete slab over earth fill
roadway wdt.:	15.8'	other features:	concrete parapet walls with incised rectangular panels set above corbeled concrete stringcourse

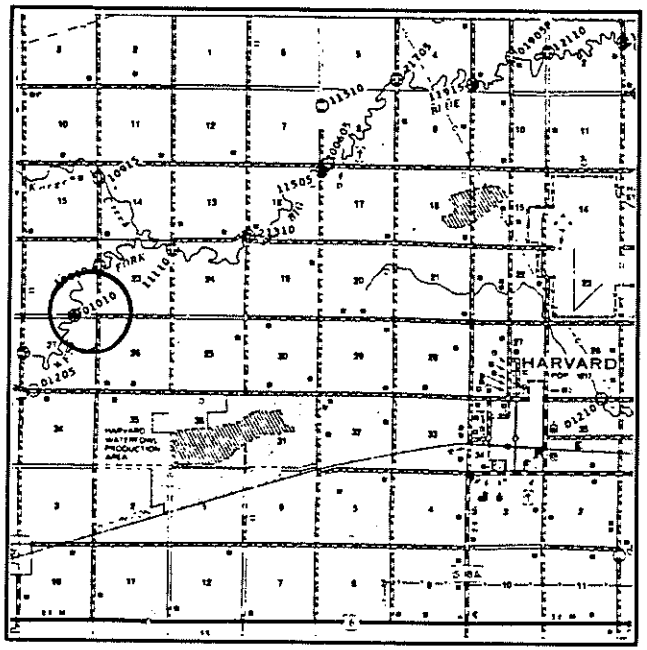
-On June 9, 1915, the Clay County Road and Bridge Committee recommended building a "35 ft steel or concrete bridge with wood or concrete floor cement abutments and wings, between sec 22 and 27, Inland Township." A month later the county board opened bids for the "Korgan Bridge" and other structures. Although steel was cheaper, the county board opted for concrete construction on all bridges at that letting. The board awarded the contract for the Korgan Bridge to the Lincoln Construction Company of Lincoln NE for $1860 (additional piling raised the price to $1943.50). The state prepared plans for the bridge in September 1915, and construction began sometime in October. Late in November an engineer from the state office inspected the bridge and reported: "We inspected the Korgan Bridge which is a 35 foot arch. The centers [falsework] were still in. The appearance was not as good as the Lindgren Bridge, altho the rails were straight. The concrete was soft in the wings but harder in the arch ring. This was due to the use of fine sand, too little cement, or poor cement. The concrete as a whole is not up to standard, but will probably improve with time and carry all loads that will ever attempt to cross it." As the engineer predicted, the Korgan Bridge still appears to be in good condition and has good integrity.

From the 1890s until 1909, Clay County built primarily wooden bridges. In 1910, however, the county secured plans for steel bridges from the state engineer and began to include steel bridge construction in its annual contracts. Two years later the county board requested the state engineer to inspect several steel bridges erected by the Western Bridge and Construction Company. The inspection revealed that the contractor was guilty of poor workmanship and using less steel than specified. The report apparently confirmed county fears that bridge contractors could not be trusted, and this marked the start of a close relationship between county and state engineer. Throughout the 1910s and 1920s, Clay County relied exclusively on the state for bridge plans, advice and final inspection. It is not surprising, therefore, that the county also began to build concrete bridges at this time, for the state engineer was a strong proponent of concrete construction. Between 1912 and 1914, the state had prepared standardized plans for concrete spans as well as standardized bidding forms to encourage the use of concrete. In 1912 the county requested the state to send plans for its first concrete bridge - a 32-foot arch to be built in Lone Tree Township. Although the county board continued to accept bids on - and even build - steel bridges, it consistently chose concrete over steel throughout the 1910s. As one of eleven such small-scale concrete structures remaining in the county, the Korgan Bridge represents this construction trend.

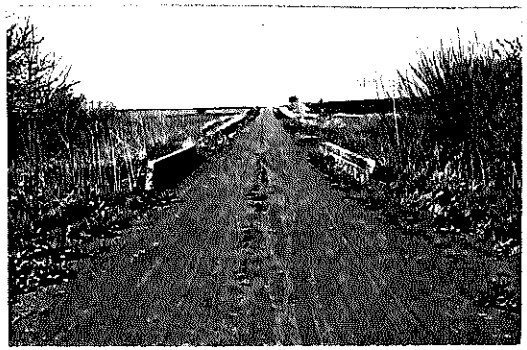
NAME(S) OF STRUCTURE

Korgan Bridge [Big Blue River Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001801010; State of Nebraska, "35 Foot Concrete Arch, Korgan Bridge, 22 and 27 T8N, R8W, Clay County," 27 September 1915, plan number 539, located in Bridge Division, Nebraska Department of Roads; Proceedings of the Clay County Commissioners, 1899-1920, located in Clay County Courthouse, Clay Center, Nebraska, refer to the following entries in Book 7: 9 June 1915 (page 415), 14 July 1915 (page 425), 4 October 1915 (page 436), 1 December 1915 (page 442); field inspection by Jeffrey A. Hess, 23 April 1989.

INVENTORIED BY

Demian Hess

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Pawnee Creek Bridge
NDOR: C001804205P

CLAY02

DATE(S) OF CONSTRUCTION
1922

LOCATION
county road over Pawnee Creek; S16, T5N, R8W
2.7 miles north, 4.5 miles west of Deweese; Clay County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 30)

CONDITION
good

OWNER
Clay County

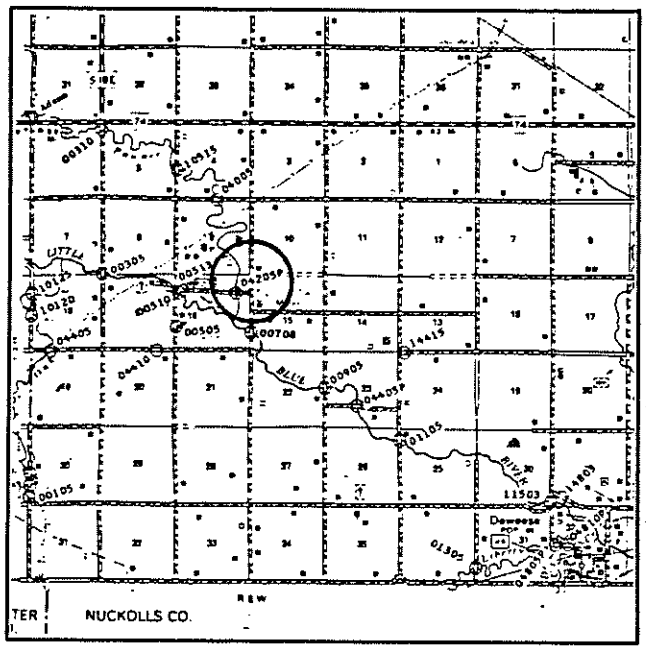
span number:	1	superstructure:	concrete filled spandrel arch
span length:	46.0'	substructure:	concrete abutments and flared, sloped wingwalls
total length:	47.0'	floor/decking:	concrete slab over earth fill
roadway wdt.:	20.4'	other features:	concrete railings with Gothic slotted cutouts and recessed rectangular panels set on top of corbeled stringcourse and capped by concrete coping

This bridge carries a county road over Pawnee Creek in the northeast quarter of Section 16, T5N, R8W, Spring Ranch Township. The structure is composed of a single 46-foot concrete arch with flared, sloped wingwalls and a corbeled arch ring on the spandrels. A corbeled stringcourse extends on top of the spandrel walls and for several feet along the wingwalls. Sitting on top of the stringcourse, a concrete parapet is detailed with alternating groups of slotted cutouts and recessed, rectangular panels. The railing is capped by a concrete coping. On May 4, 1922, the Nebraska State Engineer's office completed plans for a 45-foot concrete arch in Section 16 of Spring Ranch Township in Clay County. Late in June the county board opened bids on this bridge, awarding the contract for its construction to the Nicholls Brothers for $4,010. No alterations appear to have been made to the bridge since its construction, and it has retained a high degree of integrity.

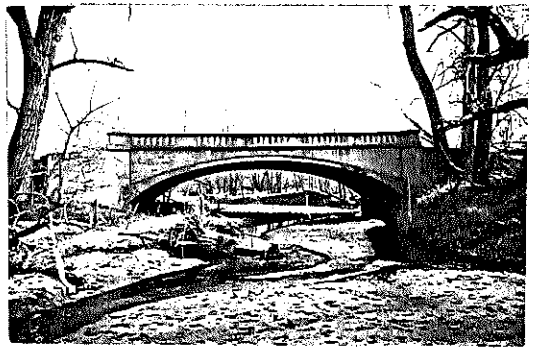
From the 1890s until 1909, the Clay County board built primarily timber bridges in the county. In 1910, however, the county secured plans for steel bridges from the state engineer and began to include steel bridge construction in its annual contracts. After discovering poor workmanship and fraud on its steel bridges in 1912, the board turned to the Nebraska State Engineer for assistance. That year the county requested plans from the state for its first concrete bridge - a 32-foot arch to be built in Lone Tree Township. Throughout the 1910s and 1920s, Clay County relied exclusively on the state for plans for both steel and concrete spans. Although the county board continued to accept bids on - and even build - steel bridges, it consistently chose concrete over steel. As one of eleven such small-scale concrete structures remaining in the county, the Pawnee Creek Bridge represents this construction trend.

NAME(S) OF STRUCTURE
Pawnee Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001804205P; State of Nebraska, "45-Foot Concrete Arch, 20-Foot Roadway, Section 16, Spring Ranch Township," 4 May 1922, plan number 685, located in Bridge Division, Nebraska Department of Roads; Proceedings of the Clay County Commissioners, located in Clay County Courthouse, Clay Center, Nebraska, refer to 30 June 1922 (Book 8, pages 207-208); field inspection by Jeffrey A. Hess, 23 April 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Little Sandy Creek Bridge
NDOR: C001804705

CLAY03

DATE(S) OF CONSTRUCTION
1922

LOCATION
county road over Little Sandy Creek; S23/24, T5N, R5W
1.5 miles south of Ong; Clay County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 22)

CONDITION
excellent

OWNER
Clay County

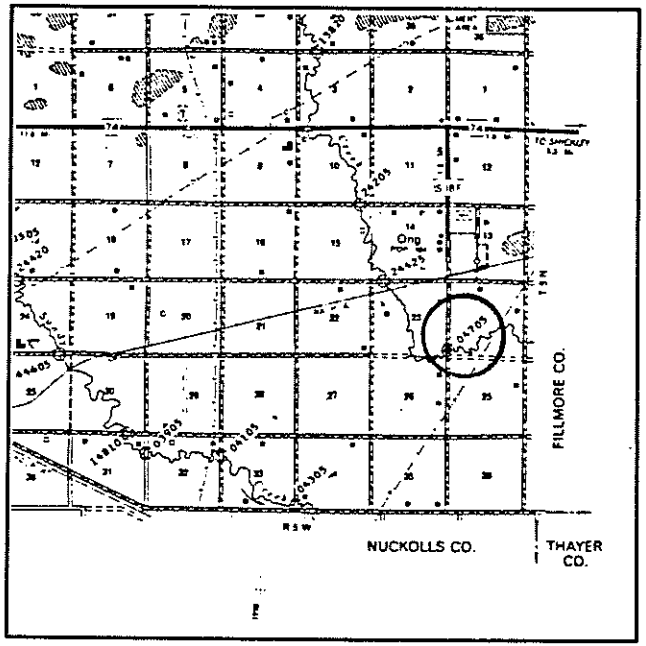
span number:	1	superstructure:	concrete filled spandrel arch
span length:	40.0'	substructure:	concrete abutments with flared, sloped wingwalls
total length:	41.0'	floor/decking:	concrete slab over earth fill
roadway wdt.:	20.0'	other features:	concrete parapet above stringcourse with alternating series of recessed rectangular panels and Gothic slotted openings

This bridge carries a county road over Little Sandy Creek on the line between Sections 23 and 24, T5N, R5W, Logan Township. The structure is a single-span, 40-foot, filled spandrel concrete arch with flared, sloped concrete wingwalls and a corbeled arch ring on each elevation. A concrete parapet sits on top of a corbeled stringcourse and is detailed by alternating groups of slotted openings with pointed ends and recessed rectangular panels. The railing is capped by a concrete coping. In detailing, the Little Sandy Creek Bridge is identical to the Pawnee Creek Bridge (**CLAY02**), built in 1922 as part of a group of seven concrete bridges designed by the Nebraska State Engineer. Plans have only been located for four of these bridges, and all appear to have been identical. Although a plan has not been found for the Little Sandy Creek Bridge, it was probably part of this group, based on the similarity of its design. Unfortunately, several different contractors built these bridges, so it is unclear who may have built this structure. The bridge is in excellent condition, and has retained a high degree of physical integrity.

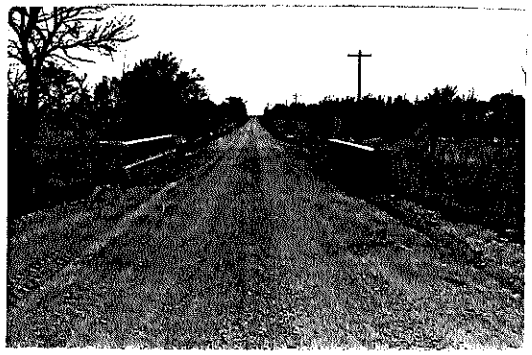
From the 1890s until 1909, the Clay County board built primarily timber bridges in the county. In 1910, however, the county secured plans for steel bridges from the state engineer and began to include steel bridge construction in its annual contracts. After discovering poor workmanship and fraud on its steel bridges in 1912, the board turned to the Nebraska State Engineer for assistance. That year the county requested plans from the state for its first concrete bridge - a 32-foot arch to be built in Lone Tree Township. Throughout the 1910s and 1920s, Clay County relied exclusively on the state for plans for both steel and concrete spans. Although the county board continued to accept bids on - and even build - steel bridges, it consistently chose concrete over steel. As one of eleven such small-scale concrete structures remaining in the county, the Little Sandy Creek Bridge represents this construction trend.

NAME(S) OF STRUCTURE
Little Sandy Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001804705; State Board of Irrigation, **Tenth Biennial Report**, 1912-14, pages 231-34; refer to the following bridge plans dated 1922 and on file in the Bridge Division, Nebraska Department of Roads: plan number 685, plan number 686, plan number 687, plan number 688; field inspection by Jeffrey A. Hess, 23 April 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Deering Bridge [School Creek Bridge] CLAY04
NDOR: C001804915

DATE(S) OF CONSTRUCTION
1916

LOCATION
county road over School Creek; S25, T8N, R5W
2 miles north, 2 miles east of Sutton; Clay County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 38)

CONDITION
excellent

OWNER
Clay County

span number:	1	superstructure:	concrete filled spandrel arch
span length:	50.0'	substructure:	concrete abutments and wingwalls
total length:	53.0'	floor/decking:	concrete deck over earth fill
roadway wdt.:	15.7'	other features:	solid concrete parapet with incised lines forming rectangular panels; corbeled stringcourse

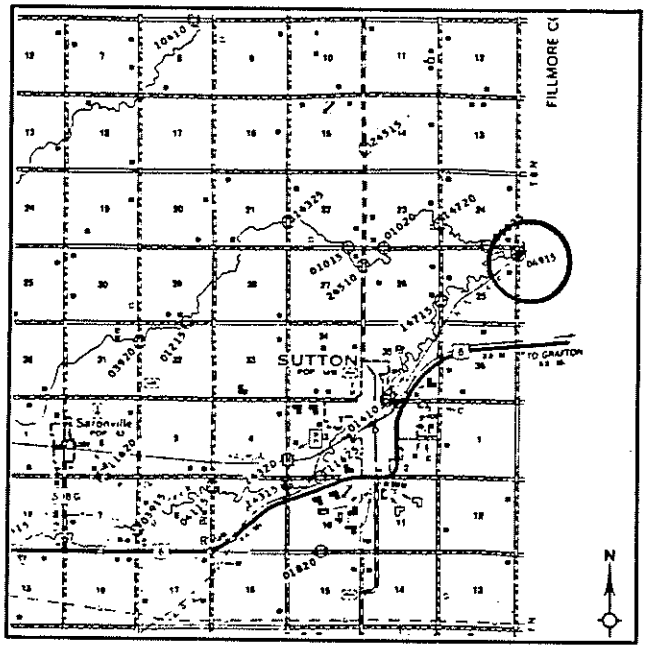
The Deering Bridge carries a county road over School Creek on the line between Clay and Fillmore counties, at the northeast corner of Section 25, T8N, R5W, School Creek Township. The structure is composed of a single filled spandrel concrete arch. A solid concrete parapet sits on top of the bridge's stringcourse and is detailed by incised lines forming rectangular panels. On May 13, 1916, the Clay County board advertised for bids "upon bridges per plans submitted by the State Engineer at the request of the Board." Included in this group were several structures, including this 50-foot span, called the "Deering Bridge". A month later the board awarded the contract to the Lincoln Construction Company of Lincoln NE and announced that "the cement arch type of bridge was selected for all construction under this contract." In addition to the initial plans prepared for bidding purposes, the state also completed plans for the Deering Bridge in October 1916. One set of drawings showed a 50-foot concrete arch with solid concrete parapets and sunken rectangular panels. Another plan showed a 50-foot riveted truss on concrete abutments which was never built. In November 1916, the state engineer stated: "In my estimation the two bridges just completed near Sutton are good examples of concrete arch construction and there is no reason why all work should not be as good." The Deering Bridge appears to have been one of the Sutton Bridges referred to by the engineer. The bridge is still in excellent condition and has retained a high degree of physical integrity.

From the 1890s until 1909, the Clay County board built primarily timber bridges in the county. In 1910, however, the county secured plans for steel bridges from the state engineer and began to include steel bridge construction in its annual contracts. After discovering poor workmanship and fraud on its steel bridges in 1912, the board turned to the Nebraska State Engineer for assistance. That year the county requested plans from the state for its first concrete bridge - a 32-foot arch to be built in Lone Tree Township. Throughout the 1910s and 1920s, Clay County relied exclusively on the state for plans for both steel and concrete spans. Although the county board continued to accept bids on - and even build - steel bridges, it consistently chose concrete over steel. As the longest and best example among the small-scale concrete structures remaining in the county, the Deering Bridge is significant on a local level for its representation of this construction trend.

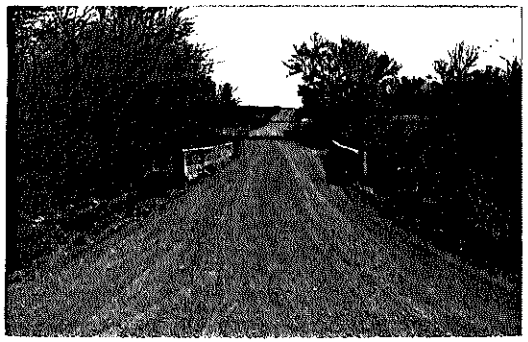
NAME(S) OF STRUCTURE

Deering Bridge [School Creek Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001804915; State Board of Irrigation, Tenth Biennial Report, 1912-14, pages 231-34; refer to the following plans stored in Bridge Division, Nebraska Department of Roads: "50-Foot Concrete Arch. East side Section 25, School Creek Township. Deering Bridge," 6 October 1916, plan number 577; "50-Foot Span. Foundation. East side, Section 25, School Creek Township," 11 October 1916, plan number 575; Proceedings of the Clay County Commissioners, located in Clay County Courthouse, Clay Center, Nebraska, refer to the following entries in Book 7: 13 May 1916 (page 468), 16 June 1916 (page 479), 3 November 1916 (page 504); field inspection by Jeffrey A. Hess, 23 April 1989.

INVENTORIED BY

Demian Hess

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bishop Bridge [Big Blue River Bridge] CLAY05
NDOR: C001811505

DATE(S) OF CONSTRUCTION
1916

LOCATION
county road over West Fork of Big Blue River; S17/18, T8N, R7W
2.3 miles west, 2.9 miles north of Harvard; Clay County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 38)

CONDITION
good

OWNER
Clay County

span number:	1	superstructure:	concrete filled spandrel arch
span length:	40.0'	substructure:	concrete abutments and wingwalls
total length:	41.0'	floor/decking:	concrete slab over earth fill
roadway wdt.:	16.1'	other features:	solid parapet walls with recessed rectangular panels

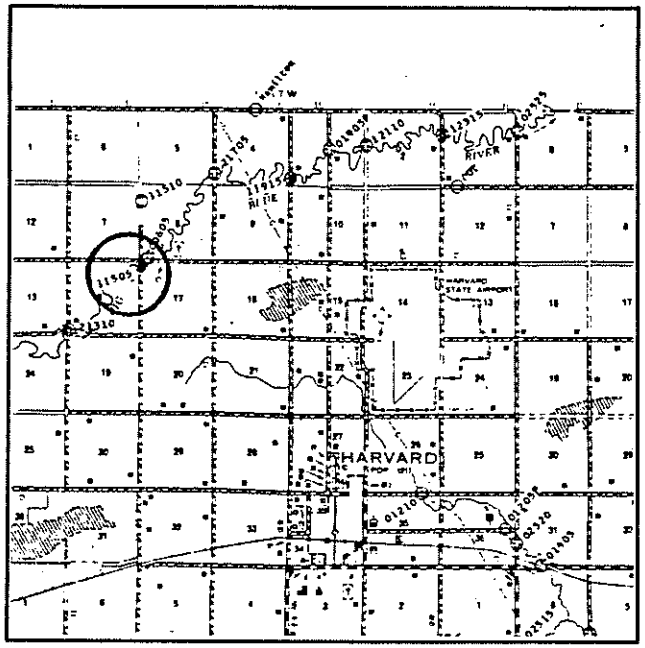
The Bishop Bridge carries a county road over the West Fork of the Big Blue River on the line between Sections 17 and 18, T8N, R7W, Harvard Township. The structure is a single-span, filled spandrel concrete arch with a chamfered arch ring. A concrete stringcourse extends along each spandrel and is surmounted by a solid concrete parapet with recessed rectangular panels. On May 13, 1916, the county board advertised for bids "upon bridges per plans submitted by the State Engineer at the request of the board." One of the plans prepared by the state engineer was for the "Bishop Bridge," initially designed as a 40-foot riveted truss. A mont later the county awarded the contract to the Lincoln Construction Company of Lincoln NE, announcing at that time that "the cement arch type of bridge was selected for all construction under this contract." On 11 November 1916, an engineer from the state office reported: "The Bishop Bridge was inspected... The forms had only been removed from one side of the bridge and the handrail so that a complete inspection was impossible. The concrete which was exposed was still green but appeared to be of good proportions. The mixing had, however, been very poorly done and the surface was very rough and porous showing carelessness in tamping. The workmanship as a whole was decidedly poor, a great many corners being chipped off and none of the lines of the coping and handrail true. I would recommend that all of the payments on the bridge be held up until the poor appearance... is remedied. This can only be done by taking off the entire top of the spandrel wall and replacing it with good concrete." The county board appears to have suspended final payment on the Bishop and another bridge near Harvard. Rather than make the required corrections, however, W.S. Collett, president of the Lincoln Construction Company, refused to complete his contract, stating in a letter to the board that "my experience in the bridge business has been more or less disastrous, from a financial point... which leads me to the conclusion that I had better quit while my credit remains good." Despite its "poor appearance," the Bishop Bridge continues to stand and has good integrity.

The Bishop Bridge is one of eleven small-scale concrete structures remaining in Clay County from its concrete construction program in the 1910s and 1920s.

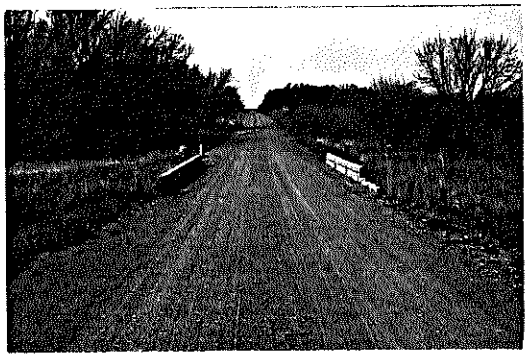
NAME(S) OF STRUCTURE

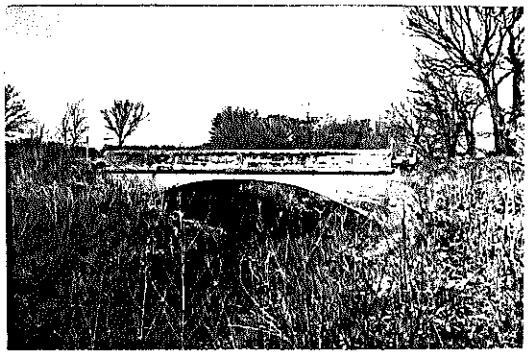
Bishop Bridge [Big Blue River Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001811505; State Board of Irrigation, Tenth Biennial Report, 1912-14, pp. 231-234; State of Nebraska, "Foundation for 40-foot Span. Bishop Bridge. Section 17 and 18, Harvard Township," 8 May 1916, plan number 545, located in Bridge Division, Nebraska Department of Roads; Proceedings of the Clay County Commissioners, located in Clay County Courthouse, Clay Center, Nebraska, refer to the following entries in Book 7: 13 May 1916 (page 468), 16 June 1916 (page 479), 13 November 1916 (page 504), 12 April 1917 (page 523); field inspection by Jeffrey A. Hess.

INVENTORIED BY

Demian Hess

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Hachtel Bridge [Big Blue River Bridge] CLAY06
NDOR: C001811915

DATE(S) OF CONSTRUCTION
1922

LOCATION
county road over West Fork of Big Blue River; S3/4, T8N, R7W
0.3 miles west, 4.2 miles north of Harvard; Clay County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 30)

CONDITION
good

OWNER
Clay County

span number:	1	superstructure:	concrete filled spandrel arch
span length:	40.0'	substructure:	concrete abutments and wingwalls
total length:	41.0'	floor/decking:	gravel over earth fill
roadway wdt.:	18.1'	other features:	concrete railing, panel detailing alternates between recessed rectangles and groups of elongated, vertical openings with pointed ends

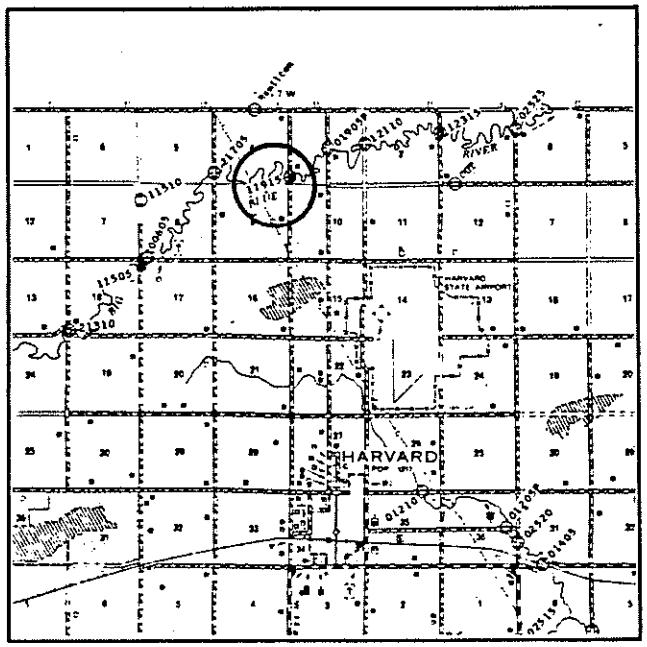
The Hachtel Bridge carries a county road over the West Fork of the Big Blue River on the line between Section 3 and 4, T8N, R7W, Harvard Township. The structure consists of a single-span, filled spandrel concrete arch with a corbeled arch ring on each elevation. A concrete stringcourse extends the length of each spandrel and is topped by a low concrete parapet. The parapet panel detailing alternates between recessed rectangles and groups of elongated, vertical openings with pointed ends. A utility pipe runs along the outside of the west railing. On June 30, 1922, the Clay County board opened bids on a group of seven concrete bridges designed by the state. The board awarded the contract to build Hachtel Bridge to J.W. Kempf of Schickley NE for $3892. The bridge appears to have been completed according to state plans. Except for the addition of a utility pipe, the structure is unaltered and has retained a high degree of physical integrity.

From the 1890s until 1909, the Clay County board built primarily timber bridges in the county. In 1910, however, the county secured plans for steel bridges from the state engineer and began to include steel bridge construction in its annual contracts. After discovering poor workmanship and fraud on its steel bridges in 1912, the board turned to the Nebraska State Engineer for assistance. That year the county requested plans from the state for its first concrete bridge - a 32-foot arch to be built in Lone Tree Township. Throughout the 1910s and 1920s, Clay County relied exclusively on the state for plans for both steel and concrete spans. Although the county board continued to accept bids on - and even build - steel bridges, it consistently chose concrete over steel. As one of eleven such small-scale concrete structures remaining in the county, the Hachtel Bridge represents this construction trend.

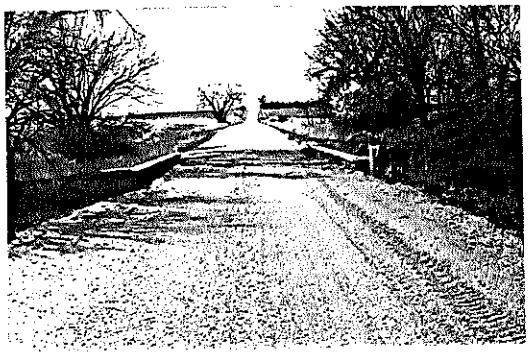
NAME(S) OF STRUCTURE

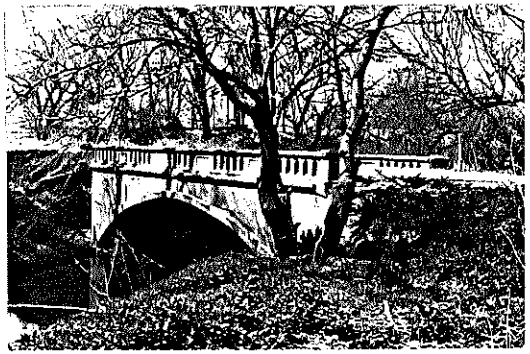
Hachtel Bridge [Big Blue River Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001811915; State Board of Irrigation, Tenth Biennial Report, 1912-14, pages 231-34; State of Nebraska, "Forty-foot Concrete Arch. Hachtel Bridge. Section 3 and 4, Harvard Township," 16 May 1922, plan number 687, located in Bridge Division, Nebraska Department of Roads; Proceedings of the Clay County Commissioners, 1899-1922, refer to 30 June 1922, Book 8, pages 207-208; field inspection by Jeffrey A. Hess, 23 April 1989.

INVENTORIED BY	AFFILIATION	DATE
Demian Hess	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Big Blue River Bridge
NDOR: C001812315

CLAY07

DATE(S) OF CONSTRUCTION
1911-12

LOCATION
county road over West Fork of Big Blue River; S1/2, T8N, R7W
4.2 miles north, 1 mile east of Harvard; Clay County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 45)

CONDITION
good

OWNER
Clay County

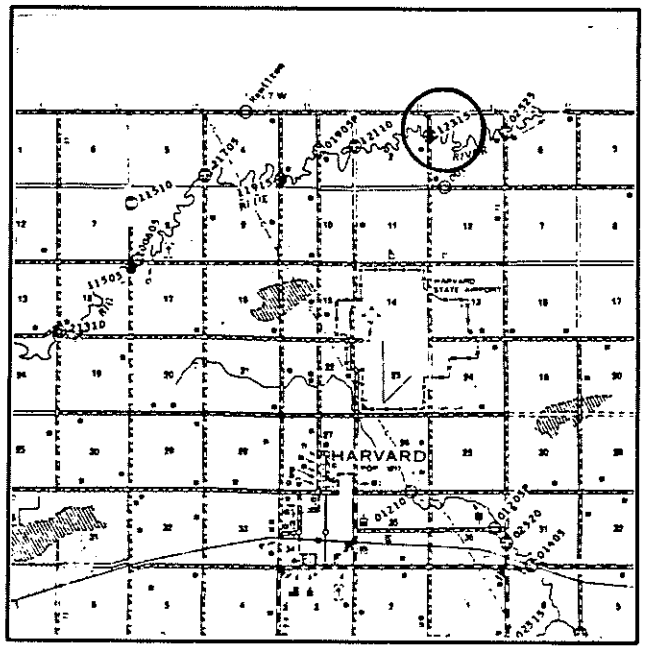
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt pony truss
span length:	45.0'	substructure:	H-pile abutments with plank back and wingwalls
total length:	46.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	19.6'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: two rectangular eyebars; vertical: 4 angles with lacing; diagonal: paired circular eyerods with turnbuckles; bottom lateral: cross-braced eyerods; sway bracing: angles forming outriders; floor beam: I-beam riveted to hanger plate by means of riveted angles; railing: angle rails and posts; builder's plate: **Built by the Western Bridge and Construction Co., Omaha, Nebraska**

-This bridge represents one of the Clay County's earliest - and one of its last - steel spans. In 1909 the county purchased its first steel trusses - one of which was supplied by the Western Bridge and Construction Company of Omaha - and awarded Western Bridge the annual contract the next year. In March 1911 the Road and Bridge Committee recommended building a 48-foot steel bridge in Harvard Township. Not all on the board, however, were convinced that more steel bridges were needed. In August, one commissioner moved "that no iron bridges be built this year." The motion was rejected, and the board contracted with Western Bridge for three steel bridges, including this pony truss, reconfigured as a 45-foot span. Despite the apparent victory of steel proponents, the anti-steel faction was to have the last word. In January 1912, the board called on the state engineer to inspect the three steel bridges built by Western Bridge "for the reason that there is a dispute as to there [sic] being built according to plans and specifications on file in this office and purchased of the State Engineer." In February, the state engineer reported that none of the bridges had been built according to specifications and that the workmanship was decidedly poor. In regard to the Big Blue River Bridge, the engineer found the following problems: looped eyebars substituted for punched eyebars in the lower chord; too-light angles installed in the verticals and sway bracing; 3x12 wood stringers substituted for 4x16 stringers; and poorly bolted field connections. The engineer also noted that although the diagonals were built according to plans, the plans were actually in error, specifying twice as much material as was actually needed. "As the bridge stands, it is unsafe for a twenty-ton-traction engine," he summarized, "And I should hesitate about taking a twelve ton engine across after the bridge has been in service for three of four years... I would not advise you to accept this Bridge under any circumstances, as we understand the Governor intends taking steps to enforce the law requiring bridges to carry a twenty-ton-traction-engine, and this Bridge would of necessity be one of the first that we would be compelled to draw to his attention." After the board rejected all three bridges, Western Bridge reinforced this structure, and the state engineer recommended accepting it in April 1912. But the county board developed a mistrust of steel bridge construction and consistently thereafter built concrete bridges. The Big Blue River Bridge is locally significant for its association with this incident and its role - however infamous - in directing county bridge building trends.

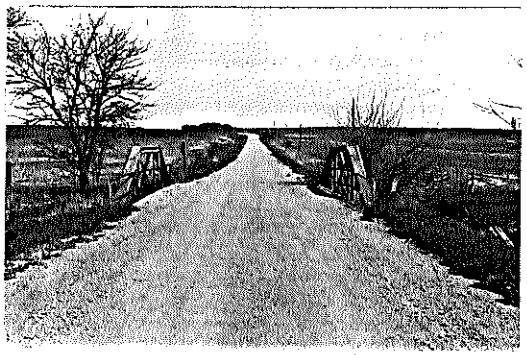
NAME(S) OF STRUCTURE

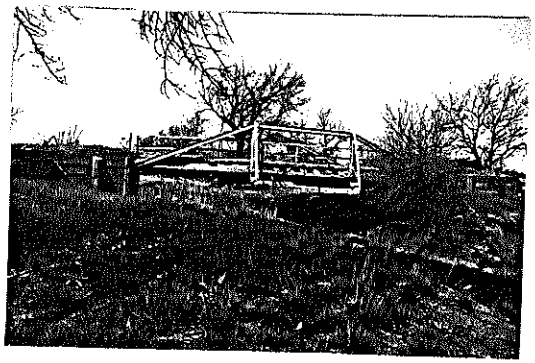
Big Blue River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001812315; Proceedings of the Clay County Commissioners, 1899-1925, located in the Clay County Courthouse, Clay Center, Nebraska, refer to the following entries in Book 7: 29 March 1911 (page 116), 7 June 1911 (page 130), 27 June 1911 (page 132), 1 August 1911 (page 144), 29 August 1911 (page 152), 10 January 1912 (page 186), 7 February 1912 (pages 188-89), 12 March 1912 (page 194), 9 April 1912 (page 202); field inspection by Jeffrey A. Hess, 23 April 1989.

INVENTORIED BY

Demian Hess

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Nichol Bridge [Little Sandy Creek Bridge] CLAY08
NDOR: C001813005

DATE(S) OF CONSTRUCTION
1917

LOCATION
county road over Little Sandy Creek; S11/14, T6N, R6W
5 miles southeast of Clay Center; Clay County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 24)

CONDITION
fair

OWNER
Clay County

span number:	1	superstructure:	concrete filled spandrel arch
span length:	20.0'	substructure:	concrete abutments and wingwalls
total length:	22.0'	floor/decking:	gravel over earth fill
roadway wdt.:	18.5'	other features:	corbeled concrete stringcourse

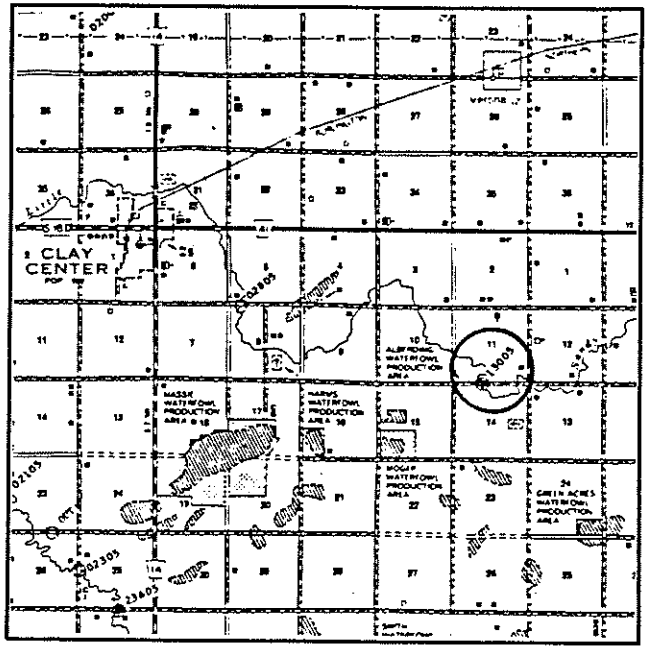
The Nichol Bridge carries a county road over the Little Sandy Creek on the line between Sections 11 and 14, T6N, R6W, Marshall Township. The structure is composed of a single filled spandrel concrete arch with flared, sloped wingwalls. A concrete coping caps the spandrels on each elevation. The coping originally formed a stringcourse, separating the spandrels from a concrete parapet. The parapet, however, has been removed. On June 1, 1917, the Clay County board awarded the annual bridge contract to the Omaha Steel Bridge Company and instructed them to start work immediately on four bridges, including this diminutive span over Little Sandy Creek, known as the "Nichol Bridge". Engineers from the state office inspected the Nichol Bridge on 28 November and 4 December 1917. The report from the first visit noted that "the foundation was built three feet deeper [than specified] on account of soft mucky bottom, making a rise of eight feet instead of five feet. The foundation and pavement have been poured, and the forms are built for superstructure and reinforcing placed. The forms and reinforcing are very satisfactory." The contractor had completed the bridge by the second inspection, and the engineer stated that the bridge "has been constructed in a good, substantial and workmanlike manner, and according to plans and specifications." At some later time the concrete parapets were removed. Due to the loss of fabric, the bridge's physical integrity has been compromised substantially.

The Nichol Bridge is typical of state-designed concrete arches built in the 1910s. Along with its guardrail, however, the bridge has lost a great deal of its physical integrity.

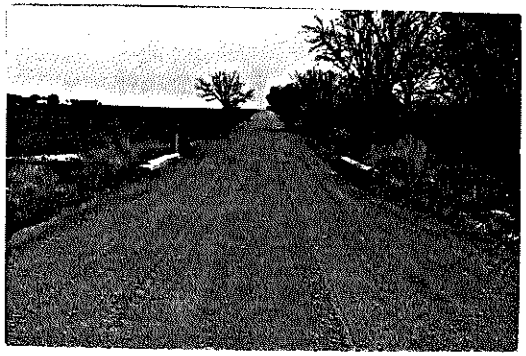
NAME(S) OF STRUCTURE

Nichol Bridge [Little Sandy Creek Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001813005; State Board of Irrigation, Tenth Biennial Report, 1912-1914, pp. 231-234; Proceedings of the Clay County Commissioners, 1899-1925, located in the Clay County Courthouse, Clay Center, Nebraska, refer to the following entries in Book 7: 12 April 1917 (page 523), 1 June 1917 (page 528), 1 December 1917 (page 570); field inspection by Jeffrey A. Hess, 23 April 1989.

INVENTORIED BY

Demian Hess

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
School Creek Bridge
NDOR: C001814315

CLAY09

DATE(S) OF CONSTRUCTION
1922

LOCATION
county road over School Creek; S9/10, T7N, R5W
5 miles west, 0.2 mile south of Sutton; Clay County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 30)

CONDITION
good

OWNER
Clay County

span number:	1	superstructure:	concrete filled spandrel arch
span length:	40.0'	substructure:	concrete abutments with flared, sloped wingwalls
total length:	41.0'	floor/decking:	gravel over earth fill
roadway wdt.:	17.9'	other features:	concrete stringcourse and parapet detailed with alternating sections of Gothic slotted cutouts and recessed rectangular panels

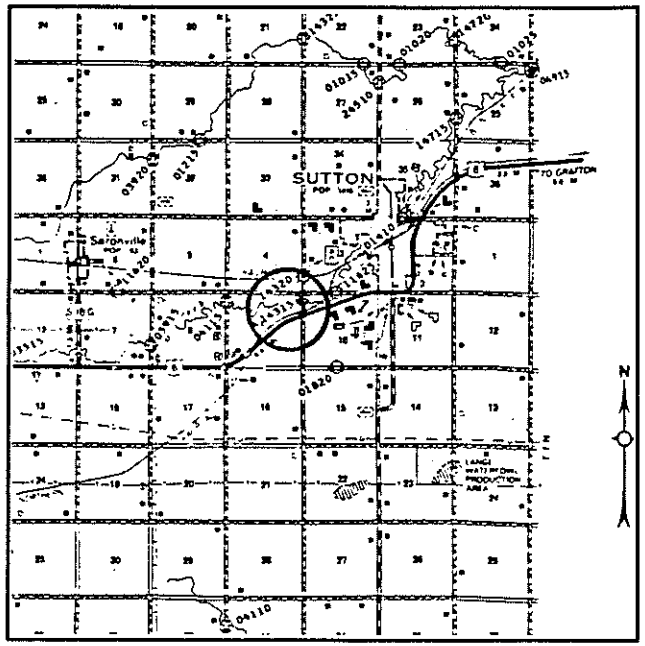
This bridge carries a county road over School Creek on the line between Sections 9 and 10, T7N, R5W, Sutton Township. The structure is composed of a single filled spandrel concrete arch with sloped concrete wingwalls. The wingwalls on the east elevation are flared approximately 30 degrees, while those on the west are almost perpendicular to the spandrel walls. A concrete stringcourse extends along each elevation and is capped by a concrete parapet. Extending to the ends of the wingwalls on the west side, the parapet is divided into alternating sections detailed with elongated vertical openings with pointed ends and recessed rectangular panels. This bridge was constructed in 1922 as part of a group of seven largely identical structures. The county board opened bids on the bridges on June 30, 1922, awarding the contract for this structure to J.W. Kempf of Schickley NE for $4156. The state had prepared plans for the bridge in May 1922, and Kempf appears to have constructed the bridge as specified. The School Creek Bridge is unaltered and has retained a high degree of integrity.

From the 1890s until 1909, the Clay County board built primarily timber bridges in the county. In 1910, however, the county secured plans for steel bridges from the state engineer and began to include steel bridge construction in its annual contracts. After discovering poor workmanship and fraud on its steel bridges in 1912, the board turned to the Nebraska State Engineer for assistance. That year the county requested plans from the state for its first concrete bridge - a 32-foot arch to be built in Lone Tree Township. Throughout the 1910s and 1920s, Clay County relied exclusively on the state for plans for both steel and concrete spans. Although the county board continued to accept bids on - and even build - steel bridges, it consistently chose concrete over steel. As one of eleven such small-scale concrete structures remaining in the county, the School Creek Bridge represents this construction trend.

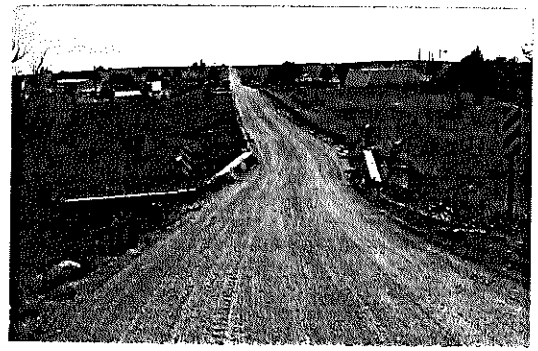
NAME(S) OF STRUCTURE

School Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001814315; State Board of Irrigation, Tenth Biennial Report, 1912-14, pages 231-34; State of Nebraska, "Forty-foot Concrete Arch. 18-foot Roadway. Sections 9 and 10, Sutton Township," 13 May 1922, plan number 688, located in Bridge Division, Nebraska Department of Roads; Proceedings of the Clay County Commissioners, 1899-1922, refer to 30 June 1922, Book 8, pages 207-208; field inspection by Jeffrey A. Hess, 23 April 1989.

INVENTORIED BY	AFFILIATION	DATE
Demian Hess	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Donaghue Bridge [Turkey Creek Bridge] CLAY10
NDOR: C001814505

DATE(S) OF CONSTRUCTION
1915

LOCATION
county road over Turkey Creek; S10/11, T6N, R5W
6.25 miles south of Sutton; Clay County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 27)

CONDITION
fair

OWNER
Clay county

span number:	1	superstructure:	concrete slab with steel stringer addition
span length:	20.0'	substructure:	concrete abutments with flared wingwalls on west and flared, sloped wings on east
total length:	21.0'	floor/decking:	concrete deck
roadway wdt.:	approx. 30'	other features:	solid concrete parapet with incised lines forming rectangular panels

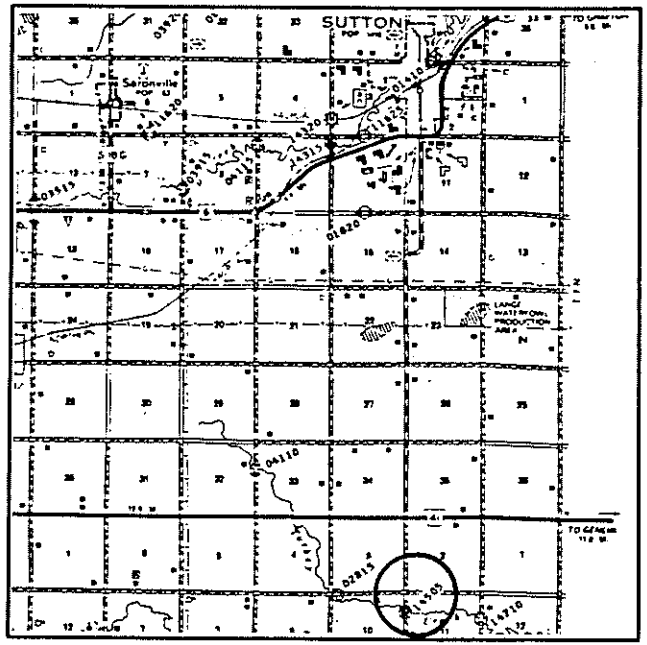
The Donaghue Bridge carries a paved county road over Turkey Creek on the line between Sections 10 and 11, T6N, R5W, Sheridan Township. Originally built as a 20-foot concrete slab on concrete abutments, the structure was widened in 1972 by the addition of four steel stringers on the west. The bridge is enclosed by solid concrete parapets detailed with incised lines forming rectangular panels. On June 9, 1915, the Clay County Road and Bridge Committee recommended building the Donaghue Bridge. Their report stated: "One 20 ft. steel or concrete bridge, wood or concrete floor, cement abutments and wings between sec 10 and 11. Sheridan Twp. This bridge should be moved about 150 feet south of the old bridge and grade should be wider." A month later the Lincoln Construction Company submitted bids on the Donaghue Bridge, including proposals for I-beam spans as well as a concrete slab, all based on plans prepared by the state engineer. The County Board accepted the Lincoln Construction Company's bid of $1,150 to build a concrete slab, although an I-beam bridge would have been cheaper. In December 1915 an engineer from the state office inspected the Donaghue Bridge and reported that it "appeared to be complete, but no forms had been removed and no examination could be made." The engineer returned later in the month and was able to state: "The concrete in the wings and foundations appears to be very soft yet, but there is no question but that it will harden during the winter and spring. It appears that there has been frost in the concrete, making the cement set very slowly. The east rail was very crooked, with a crack extending the entire length caused by uneven settlement of the concrete in the rail. The west rail was a little better looking. The concrete had not been cleaned and many chunks of loose material were left sticking around on the coping. It was recommended that the bridge be accepted with the exception of the handrail and that the contractor be instructed to place a new rail on the bridge as soon as possible in the spring." The Donaghue Bridge was accepted and has functioned in place since.

The structure is typical of state designed, concrete slab construction in the 1910s. Due to its loss of integrity, however, the bridge is not eligible for the National Register.

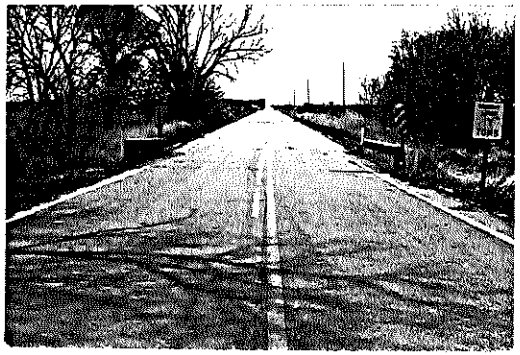
NAME(S) OF STRUCTURE

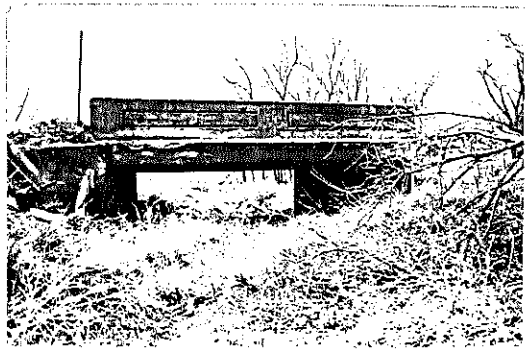
Donaghue Bridge [Turkey Creek Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001814505; State Board of Irrigation, **Tenth Biennial Report**, 1912-14, pages 231-34; State of Nebraska, "20-Foot I-Beam. Section 10 and 11, T6N, R5W," 15 May 1915, plan number 600, located in Bridge Division, Nebraska Department of Roads; Proceedings of the Clay County Commissioners, 1899-1925, located in Clay County Courthouse, Clay Center, Nebraska, refer to the following entries in Book 7: 9 June 1915 (page 415), 14 July 1915 (pages 424-5), 1 December 1915 (page 442), 22 December 1915 (page 445); field inspection by Jeffrey A. Hess, 23 April 1989.

INVENTORIED BY

Demian Hess

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Kruitzfield Bridge [Big Sandy Creek Bridge] CLAY11
NDOR: C001823605

DATE(S) OF CONSTRUCTION
1915

LOCATION
county road over Big Sandy Creek; S25/36, T6N, R7W
1 mile north, 1.5 miles east of Fairfield; Clay County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 29)

CONDITION
fair

OWNER
Clay County

span number:	1	superstructure:	concrete filled spandrel arch
span length:	36.0'	substructure:	concrete abutments with flared, sloped wingwalls
total length:	37.0'	floor/decking:	gravel over earth fill
roadway wdt.:	15.3'	other features:	stringcourse, low concrete parapets

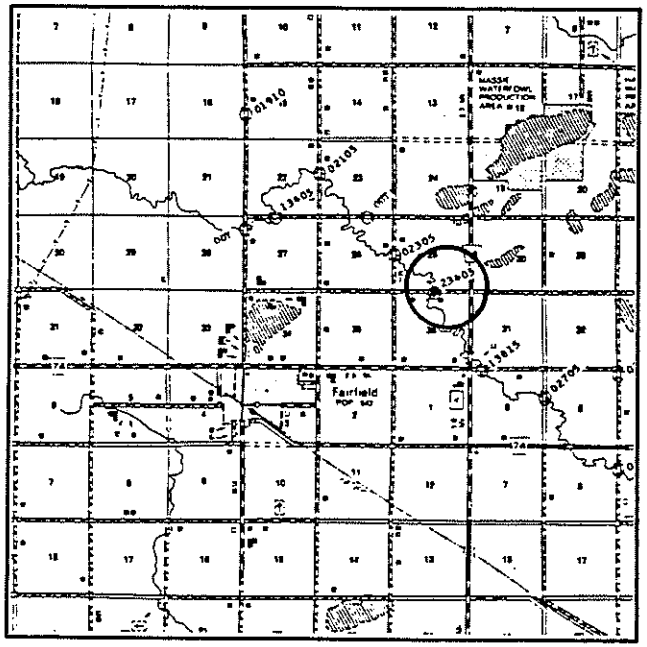
The Kruitzfield Bridge carries a county road over the Big Sandy Creek on the line between Sections 25 and 36, T6N, R7W, Lone Tree Township. The structure is composed of a single filled spandrel concrete arch with flared, sloped wingwalls. A concrete stringcourse is located on each spandrel. A concrete parapet originally enframed the roadway, but it has broken off. Concrete is spalling from the bridge, exposing rebars in the spandrels and in the vault. On June 9, 1915, the Clay County Road and Bridge Committee recommended building the Kruitzfield Bridge. On 14 July 1915, the Lincoln Construction Company submitted bids on the bridge, offering estimates on pinned and riveted trusses as well as a concrete arch. The county board revealed its clear preference for concrete by accepting the contractor's bid of $1450 for a concrete arch, even though the steel trusses were cheaper. In December 1915 an engineer from the state office reported: "The Kruitzfield Bridge, a 35' arch, was found to be in good condition. The concrete was hard and first class. The appearance was not the best, the surface being rough and the spandrels crooked. The centers had not been removed." The bridge was apparently accepted and has carried traffic since, with the removal of its parapets as the only major alteration.

The structure is typical of state designed concrete arch bridges built in the 1910s. Due to its loss of historic fabric, however, it is not eligible for the National Register.

NAME(S) OF STRUCTURE

Kruitzfield Bridge [Big Sandy Creek Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001823605; State Board of Irrigation, Tenth Biennial Report, 1912-14, pages 231-34; Proceedings of the Clay County Commissioners, 1899-1925, located in Clay County Courthouse, Clay Center, Nebraska, refer to the following entries in Book 7: 9 June 1915 (page 415), 14 July 1915 (pages 424-25), 1 December 1915 (page 442); field inspection by Jeffrey A. Hess, April 1989.

INVENTORIED BY

Demian Hess

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Onken Bridge [Sandy Creek Bridge] CLAY12
NDOR: none

DATE(S) OF CONSTRUCTION
1915

LOCATION
county road over Sandy Creek; S5/8, T6N, R8W
0.5 miles north, 0.25 miles east of Glenville; Clay County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 33)

CONDITION
good

OWNER
Clay County

span number:	1	superstructure:	concrete slab
span length:	approx. 17'	substructure:	concrete abutments with flared, sloped wingwalls
total length:	approx. 18'	floor/decking:	concrete deck
roadway wdt.:	approx. 22'	other features:	solid concrete parapets with incised rectangular panels

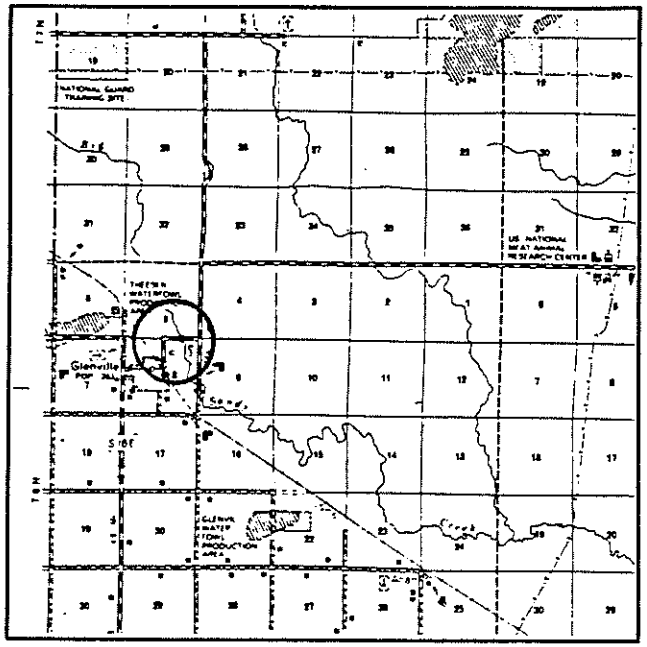
The Onken Bridge carries a paved county road over the Sandy Creek between Sections 5 and 8, T6N, R8W, Glenville Township. The structure is composed of a 17-foot concrete slab on concrete abutments. The roadway is enclosed by solid concrete parapets detailed with incised rectangular panels. The concrete is beginning to spall, exposing rebars on the north side of the east abutment. On 9 June 1915, the Clay County Road and Bridge Committee recommended constructing a "16 ft. concrete bridge with 20 ft. roadway between sec 5 and 8 Glenville Twp," to be known as the Onken Bridge. The State of Nebraska prepared plans for the bridge, and the Lincoln Construction Company of Lincoln NE submitted bids on this and several other structures on July 14th. In addition to bidding on a concrete slab, the contractor provided estimates for I-beam bridges. Reflecting the county's clear preference for concrete, the board awarded the Lincoln Construction Company the contract to build a 16-foot concrete slab for $990, even though the I-beam spans were less expensive. The bridge was inspected by an engineer from the state office who reported: "The Onken Bridge, a 16' flat top span, was found to be all right. The forms had settled when the concrete was poured, allowing the center to sag. The rails were slightly curved." The bridge has not been altered since its construction, and has retained a high degree of physical integrity.

From the 1890s until 1909, the Clay County board built primarily timber bridges in the county. In 1910, however, the county secured plans for steel bridges from the state engineer and began to include steel bridge construction in its annual contracts. After discovering poor workmanship and fraud on its steel bridges in 1912, the board turned to the Nebraska State Engineer for assistance. That year the county requested plans from the state for its first concrete bridge - a 32-foot arch to be built in Lone Tree Township. Throughout the 1910s and 1920s, Clay County relied exclusively on the state for plans for both steel and concrete spans. Although the county board continued to accept bids on - and even build - steel bridges, it consistently chose concrete over steel. As one of eleven such small-scale concrete structures remaining in the county, the Onken Bridge represents this construction trend.

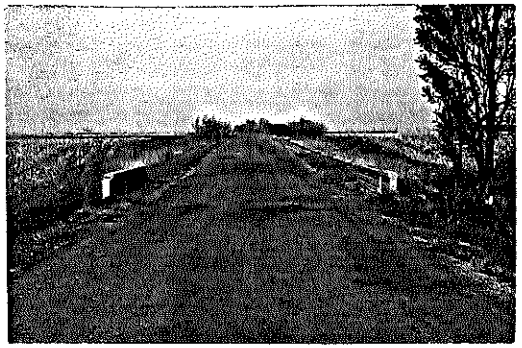
NAME(S) OF STRUCTURE

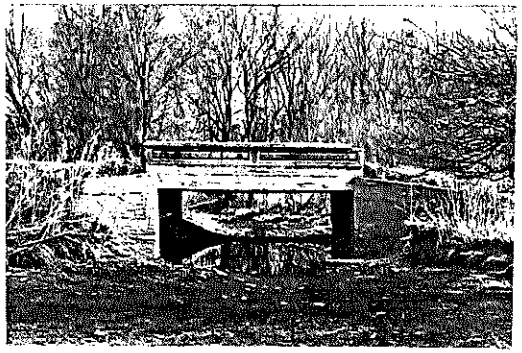
Onken Bridge [Sandy Creek Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES

Nebraska State Board of Irrigation, **Tenth Biennial Report**, 1912-14, pages 231-34; State of Nebraska, "16-Foot Concrete Slab. Section 5 and 8, T6N, R8W. Onken Bridge," 25 May 1915, plan number 566, located in Bridge Division, Nebraska Department of Roads; Proceedings of the Clay County Commissioners, 1899-1925, located in Clay County Courthouse, Clay Center, Nebraska, refer to the following entries in Book 7: 9 June 1915 (page 415), 14 July 1915 (pages 424-25), 1 December 1915 (page 442); field inspection by Jeffrey A. Hess, 23 April 1989.

INVENTORIED BY	AFFILIATION	DATE
Demian Hess	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Shell Creek Bridge
NDOR: C001900310

COLF01

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
county road over Shell Creek; S19/20, T18N, R2E
5.8 miles north of Richland; Colfax County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 24)

CONDITION
good

OWNER
Colfax County

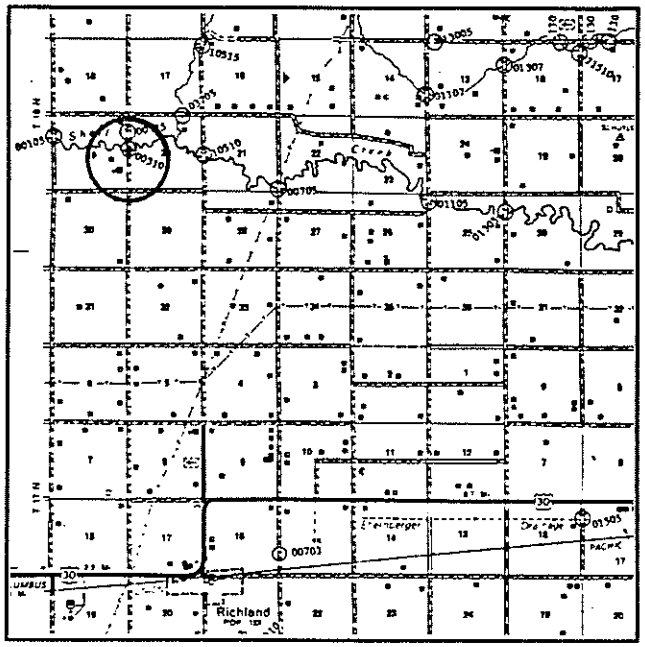
span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt pony truss with outriders
span length:	80.0'	substructure:	steel pile bent abutments with plank and sheet piling back- and wingwalls
total length:	82.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	16.1'	other features:	upper chord: 2 channels with cover plate and lacing bars; lower chord: punched rectangular eyebars; vertical: 2 pair angles with batten plates; diagonal: punched eyebars; counter: looped eyebar with turnbuckle; lateral bracing: rod with threaded ends; floor beam: I-beam, field bolted to vertical; guardrail: 2 channels

Located almost six miles north of Richland in western Colfax County, this medium-span bridge carries a gravel surfaced county road over Shell Creek. The structure consists of a single pinned Pratt pony truss, supported by steel pile bent abutments. Based on its configuration, detailing and roadway width, the Shell Creek Bridge appears to have been erected from a standard plan developed by the Nebraska State Engineer around 1915. Contractors Charles G. Sheely, C.E. Beaty and the Elkhorn Construction Company were all active in Colfax County during this general period, and the Maple Creek Bridge is probably attributable to one of these three. It is today in essentially unaltered condition.

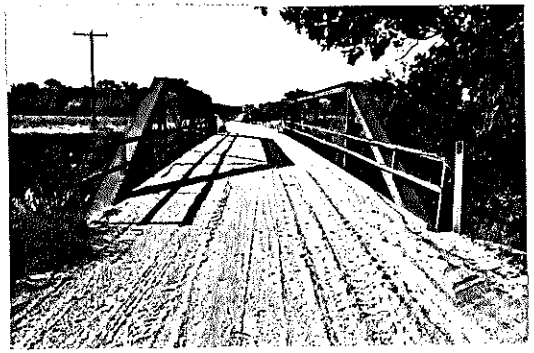
With its construction history largely undocumented, the Shell Creek Bridge is a typical example of a common structural type.

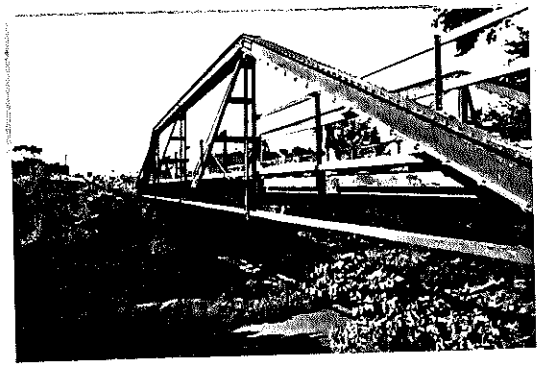
NAME(S) OF STRUCTURE
Shell Creek Bridge

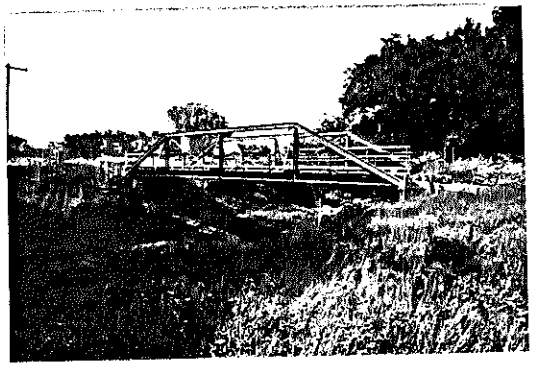
PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP







SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001900310; field inspection by Lon Johnson, 19 July 1989.

INVENTORIED BY	AFFILIATION	DATE
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Maple Creek Bridge
NDOR: C001922220

COLF02

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over East Fork Maple Creek; S22/27, T19N, R4E
9.2 miles north of Rogers; Colfax County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 19)

CONDITION
good

OWNER
Colfax County

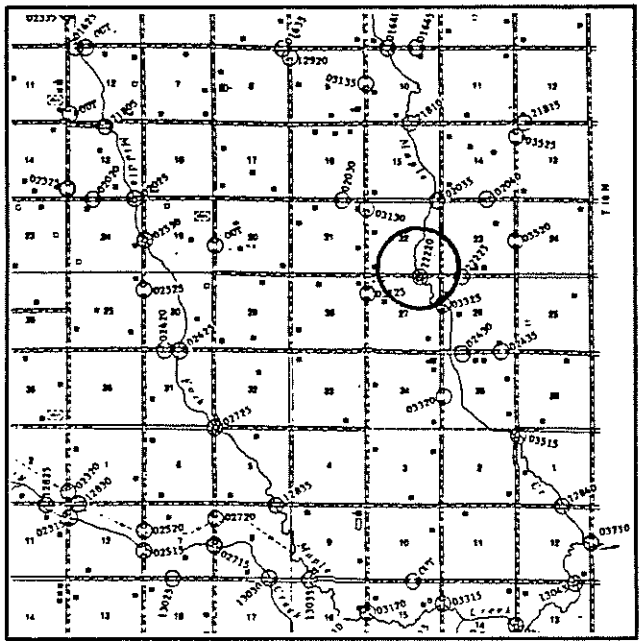
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt half-hip pony truss
span length:	48.0'	substructure:	steel I-beam piles with plank back- and wingwalls
total length:	49.0'	floor/decking:	plank on plank over I-beam stringers
roadway wdt.:	15.8'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: punched eyebars; vertical: 4 angles with batten plates; diagonal: punched eyebars; counter: looped eyebar with turnbuckle; lateral bracing: rod with threaded ends; floor beam: I-beam, field bolted to vertical; guardrail: 2 channels

Located nine miles north of Rogers in eastern Colfax County, this short-span bridge carries an unpaved section-line road over Maple Creek. The structure consists of a single pinned Pratt half-hip pony truss, supported by steel pile bent abutments. Based on its configuration, detailing and roadway width, the Maple Creek Bridge appears to have been erected around 1910. Contractors Charles G. Sheely, C.E. Beaty and the Elkhorn Construction Company were all active in Colfax County during this general period, and the Maple Creek Bridge is probably attributable to one of these three. It is today in essentially unaltered condition.

With its construction history largely undocumented, the Maple Creek Bridge is a typical example of a common structural type.

NAME(S) OF STRUCTURE
Maple Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C001922220; field inspection by Lon Johnson, 19 July 1989.

INVENTORIED BY	AFFILIATION	DATE
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Plum Creek Bridge
NDOR: C002001605

CUMI01

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over Plum Creek; S1/12, T23N, R5E
4.0 miles north of Beemer; Cuming County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 29)

CONDITION
good

OWNER
Cuming County

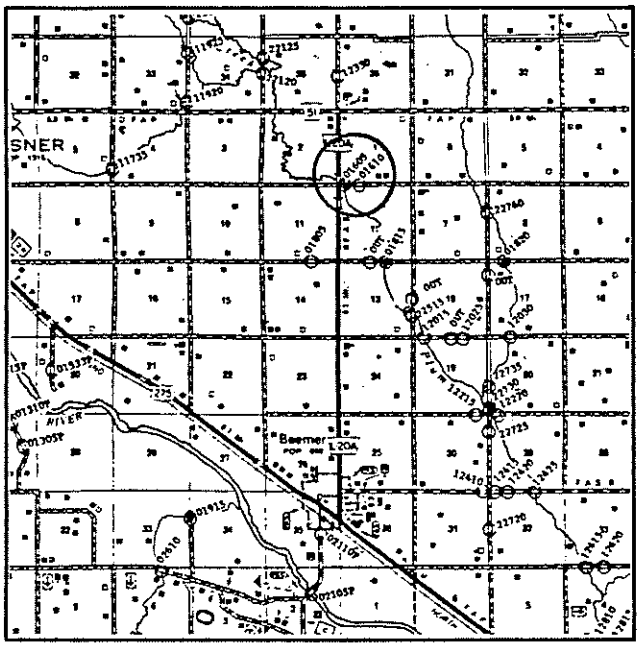
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt half-hip pony truss
span length:	50.0'	substructure:	steel pile bent piers and abutments with sheet piling backwalls and timber wingwalls
total length:	110.0'	floor/decking:	timber deck over transverse I-beam stringers
roadway wdt.:	15.0'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: looped eye-bars; vertical: 2 pair angles with lacing; diagonal: eyerods; lateral bracing: rod with threaded ends; floor beam: I-beam, U-bolted to lower chord pin at vertical; guardrail: lattice (extends over both approach spans)

This bridge carries a gravel-surfaced county road across Plum Creek a little less than five miles southeast of West Point. The structure is comprised of a pinned Pratt half-hip pony truss with a flanking steel stringer approach span on one side and a transverse joist girder approach on the other. The spans rest on a substructure of steel pile bents with timber back and wingwalls. County records generally fail to list specific bridges in their discussion of bridge work, making definitive identification of this modest structure difficult. Based on its half-hip design, physical condition, approach spans and pinned connections, the structure appears to date to ca.1910. The Standard Bridge Company of Omaha held Cuming County's annual bridge building contracts from 1902 through the 1920s. Made up of steel components rolled by the Cambria Steel Company in Pittsburgh, this truss displays the earmarks of a Standard Bridge structure. The channel span and its approaches appear essentially unaltered, and as such retains an overall high degree of historical integrity.

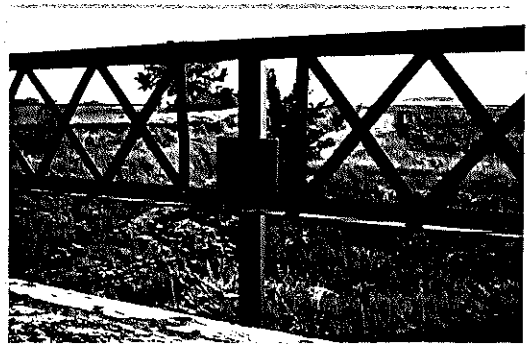
The Standard Bridge Company developed its own designs for the pinned Pratt half-hip pony truss and marketed it extensively during the early 1900s. The company also developed the transverse joist girder and pioneered the use of H-pile substructures in Nebraska. The Plum Creek Bridge incorporates all three elements, thus distinguishing it as a prototypical Standard Bridge Company structure. It is otherwise unremarkable as a typical example of a relatively common vehicular bridge configuration.

NAME(S) OF STRUCTURE
Plum Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C002001605; Cuming County Supervisors' Record, Books 2 - 4, covering period 1893 to 1920, located at the Cuming County Courthouse, West Point, Nebraska; field inspection by Lon Johnson, July 1989.

INVENTORIED BY	AFFILIATION	DATE
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Plum Creek Bridge
NDOR: C002001815

CUMI02

DATE(S) OF CONSTRUCTION
1915

LOCATION
county road over Plum Creek; S12/13, T23N, R5E
3.1 miles northeast of Beemer; Cuming County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 36)

CONDITION
good

OWNER
Cuming County

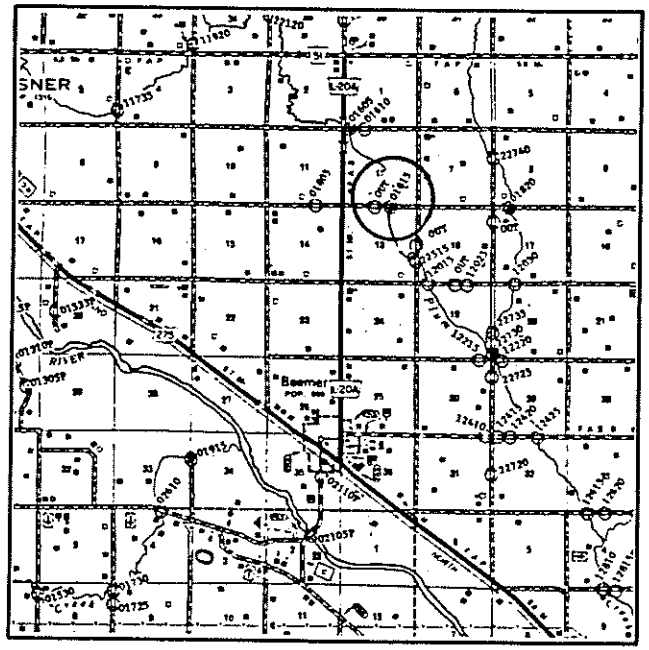
span number:	1	superstructure:	steel, 5-panel, pin- / rigid-connected Pratt pony truss
span length:	70.0'	substructure:	steel I-beam pile bent abutments with timber back- and wingwalls
total length:	71.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	16.0'	other features:	lower chord: 2 channels with cover plate and lacing; lower chord: 2 punched eyebars; vertical: 2 pair angles with batten plates; diagonal: eyebars; counter: square eyerod with turnbuckle; floor beam: I-beam, field bolted to vertical below lower chord; lateral bracing: rods; guardrails: 2 channels

This bridge carries a county road over Plum Creek three miles northeast of Beemer. The structure consists of a pin-/rigid-connected Pratt pony truss, which rests on a substructure of steel piles with timber back and wingwalls. On August 10, 1915, the Cuming County Supervisors ordered this bridge from the Standard Bridge Company. Standard Bridge held Cuming County's annual bridge building contracts each year from 1902 to the 1920s. Using a standard plan of the Nebraska State Engineer, the Omaha-based contractor completed the bridge later that year. Since then the Plum Creek Bridge has carried vehicular traffic in essentially unaltered condition.

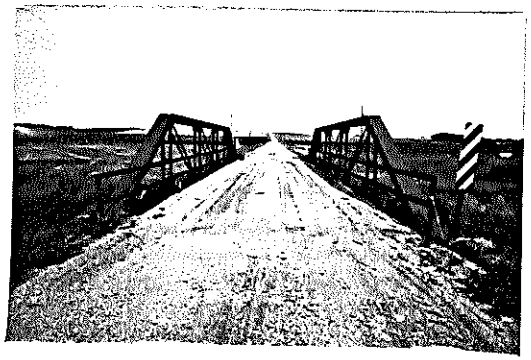
The Plum Creek Bridge is typical of the many small structures built by the counties during the first two decades of this century in response to the public's demand for adequate transportation networks. Unlike many similar structures, the builder and the construction date of this bridge are documented.

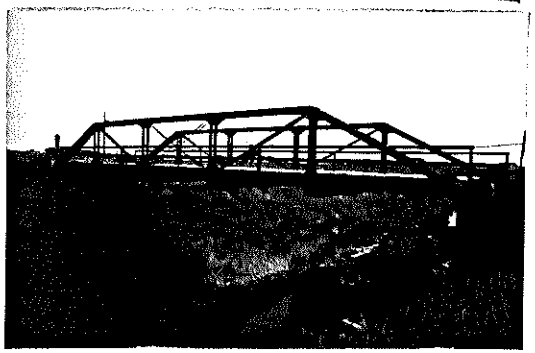
NAME(S) OF STRUCTURE
Plum Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C002001815; Cuming County Supervisors' Record, 27 February 1915, 10 August 1915, located at the Cuming County Courthouse, West Point, Nebraska; field inspection by Lon Johnson, July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C002001820

CUMI03

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
county road over unnamed stream; S8/17, T23N, R6E
3.7 miles northeast of Beemer; Cuming County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 29)

CONDITION
good

OWNER
Cuming County

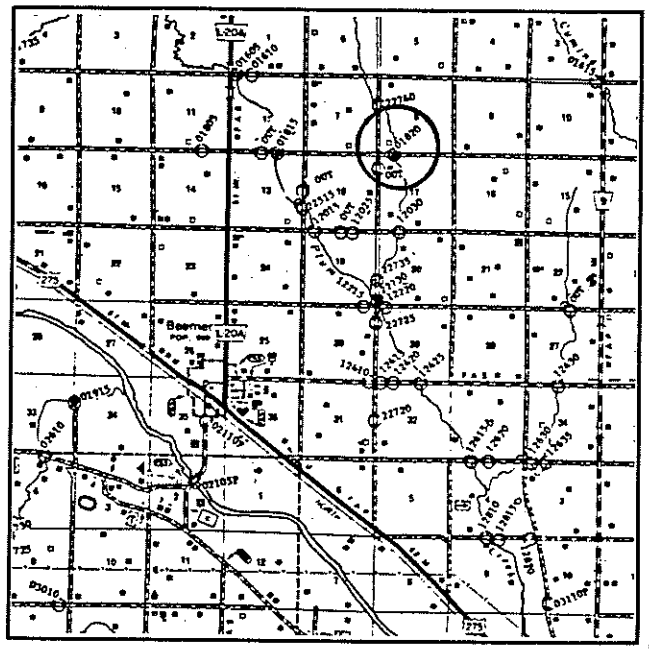
span number:	1	superstructure:	steel, 3-panel, pin-/rigid connected Pratt pony truss
span length:	40.0'	substructure:	I-beam piles with plank back- and wingwalls
total length:	41.0'	floor/decking:	plank on plank over I-beam stringers
roadway wdt.:	16.0'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: forged eye-bars; vertical: 2 pair angles with batten plates; diagonal: square rods; floor beam: I-beams; guardrail: 2 channels

This bridge carries a gravel-surfaced county road across an intermittent stream a little under four miles northeast of Beemer. The structure is composed of a five-panel, pin-/rigid-connected Pratt pony truss, which rests on steel piles with timber back and wingwalls. County records generally fail to list specific bridges in their discussion of bridge work, making definitive identification of this modest structure difficult. Based, though, on its combined pinned and riveted design, roadway width and physical condition, the structure appears to have been fabricated using a standard design by the Nebraska State Engineer ca.1915. The Standard Bridge Company of Omaha held Cuming County's annual bridge building contracts from 1902 to the 1920s. This bridge appears to have suffered no major alterations.

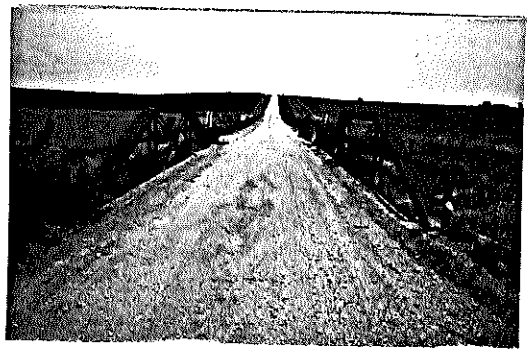
Cuming County began awarding annual bridge construction contracts as early as 1894, and then experimented with building its own bridges in 1900 and 1901. After that, the Standard Bridge Company was awarded the annual bridge contracts through the 1920s. With its construction history largely undocumented, this bridge is an unremarkable example of a common vehicular truss type in Cuming County and Nebraska.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C002001820; Cuming County Supervisors' Record, Books 2 - 4, covering period 1893 to 1920, located at the Cuming County Courthouse, West Point, Nebraska; field inspection by Lon Johnson, July 1989.

INVENTORIED BY	AFFILIATION	DATE
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Rock Creek Bridge
NDOR: C002001915

CUMI04

DATE(S) OF CONSTRUCTION
ca.1905

LOCATION
county road over Rock Creek; S33/34, T23N, R5E
2 miles west of Beemer; Cuming County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 26)

CONDITION
good

OWNER
Cuming County

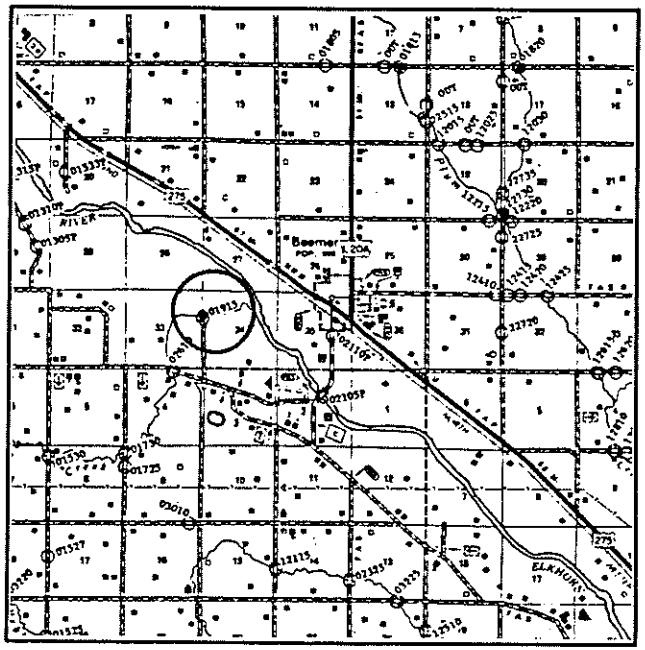
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt half-hip pony truss
span length:	48.0'	substructure:	timber pile abutments with timber back- and wingwalls
total length:	50.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	16.0'	other features:	upper chord: 2 channels with batten plates; lower chord: 2 looped eyebars; vertical: 2 pair angles with batten plates; diagonal: 2 square eyerods; counter: 1 eyebar with turnbuckle; floor beam: I-beam, U-bolted to lower chord pin at vertical; guardrail: none

This bridge carries a secondary county road across Rock Creek two miles west of Beemer in central Cuming County. The superstructure consists of a single pin-connected Pratt half-hip pony truss; the substructure, timber piles with timber back- and wingwalls. County records generally fail to list specific bridges in their discussion of bridge work, making definitive identification of this modest structure difficult. Based, though, on its half-hip design, U-bolted floor beams and pinned connections, the structure appears to date to ca.1905. The Standard Bridge Company of Omaha held Cuming County's annual bridge building contracts from 1902 to the 1920s. Made up of steel components rolled in Pittsburgh by the Cambria Steel Company, this truss displays the earmarks of a Standard Bridge structure.

The Standard Bridge Company developed its own designs for the pinned Pratt half-hip pony truss and marketed it extensively during the early 1900s. With annual contracts for eastern Nebraska counties such as Cuming, Wayne, Thurston, Stanton, Dodge and Burt, the firm erected hundreds of half-hip trusses between 1900 and 1920. Many of these remain in place today. As an undocumented example of this common structural type, the Dog Creek Bridge appears to lack any appreciable level of historical or technological significance.

NAME(S) OF STRUCTURE
Rock Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C002001915; Cuming County Supervisors' Record, Books 2 - 4, covering period 1893 to 1920, located at the Cuming County Courthouse, West Point, Nebraska; field inspection by Lon Johnson, July 1989.

INVENTORIED BY	AFFILIATION	DATE
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Cuming Creek Bridge
NDOR: C002004510

CUMI05

DATE(S) OF CONSTRUCTION
1911

LOCATION
county road over Cuming Creek; S2/3, T21N, R7E
6.0 miles east of West Point; Cuming County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 36)

CONDITION
good

OWNER
Cuming County

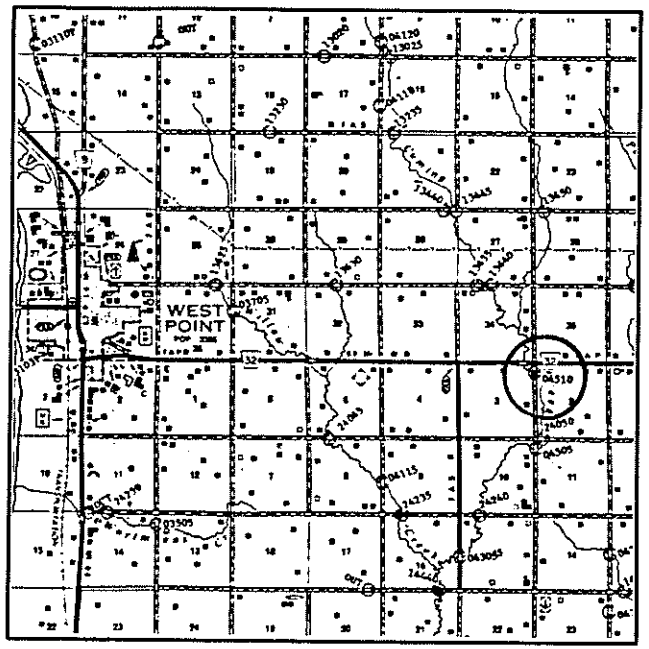
span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt half-hip pony truss
span length:	60.0'	substructure:	steel I-beam pile bent abutments with timber back- and wingwalls
total length:	61.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	19.5'	other features:	top chord: 2 channels with cover and batten plates; bottom chord: looped eyebars at hips, punched eyebars at middle panels; vertical: 2 pair angles with lacing; diagonal: square rods; counter: eyerod with turnbuckle; floor beam: I-beam, U-bolted to lower chord pin at vertical; lateral bracing: rod with threaded ends; guardrails: lattice

This bridge carries a graveled road over Cuming Creek six miles east of West Point. The structure consists of a four-panel, pin-connected Pratt half-hip pony truss, which rests on a substructure of steel piles with timber back- and wingwalls. On May 9, 1911, the Cuming County Supervisors ordered this truss from the Standard Bridge Company of Omaha. Standard Bridge held Cuming County's annual bridge building contracts each year from 1902 through the 1920s. Using steel rolled in Pittsburgh by Jones and Laughlin, Standard Bridge completed the structure later in 1911. Since that time, the Cuming Creek Bridge has carried vehicular traffic in its rural eastern Cuming County location in essentially unaltered condition.

This bridge is typical of the many small structures built by the counties during the first two decades of this century in response to the public's demand for adequate transportation networks. Unlike may similar structures, the builder and the construction date of this bridge are documented.

NAME(S) OF STRUCTURE
Cuming Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C002004510; Cuming County Supervisors' Record, 9 May 1911, located at the Cuming County Courthouse, West Point, Nebraska; field inspection by Lon Johnson, July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Plum Creek Bridge
NDOR: C002011150

CUMI06

DATE(S) OF CONSTRUCTION
ca.1920

LOCATION
county road over Plum Creek; S1/2, T24N, R4E
6.5 north of Wisner; Cuming County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 32)

CONDITION
good

OWNER
Cuming County

span number:	1	superstructure:	steel, 5-panel, pin-connected Pratt pony truss
span length:	80.0'	substructure:	steel pile bent abutments with timber back- and wingwalls (east)
total length:	81.0'	floor/decking:	timber deck over transverse I-beam stringers
roadway wdt.:	19.5'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: punched eye-bars; vertical: 2 pair angles with batten plates; diagonal: eyebars at hip and square eyerods at center panels; floor beam: I-beam, field bolted to vertical below lower chord (transverse joist girders, to which the stringers are attached, rest on the floor beams); guardrail: lattice

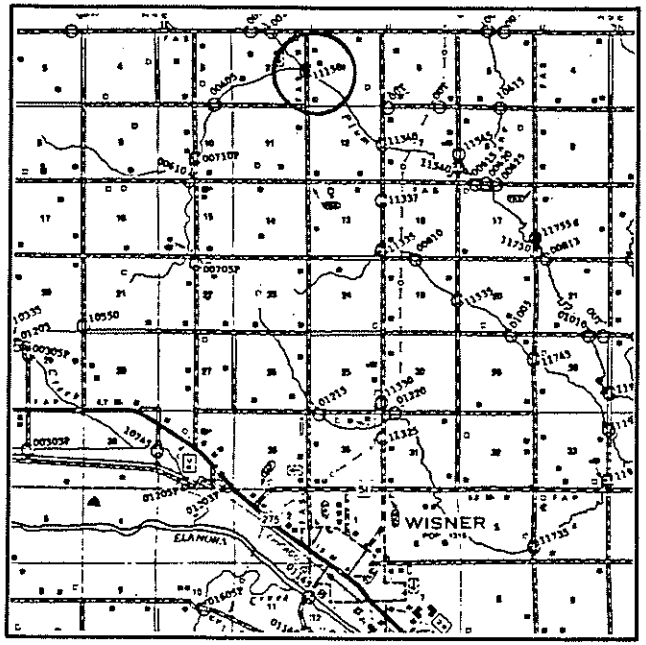
This bridge carries a gravel-surfaced county road across Plum Creek 6-1/2 miles north of Wisner near the Wayne County line. The structure is comprised of a five-panel, pin-connected Pratt pony truss, supported by steel piles with timber back- and wingwalls. County records generally fail to list specific bridges in their discussion of bridge work, making definitive identification of this modest structure difficult. Based on its physical condition, pinned connections and floor system, the structure appears to date to ca.1920. The Standard Bridge Company of Omaha held Cuming County's annual bridge building contracts from 1902 through the 1920s. Made up of steel components rolled by Inland, this truss displays the earmarks of a Standard Bridge structure.

In the early 1920s the Standard Bridge Company experimented with transverse joist floor systems in its small-scale pony trusses. The Plum Creek Bridge is one of these hybrid structures remaining on Nebraska's secondary roads. But with its construction history largely undocumented, it is one of the less noteworthy examples.

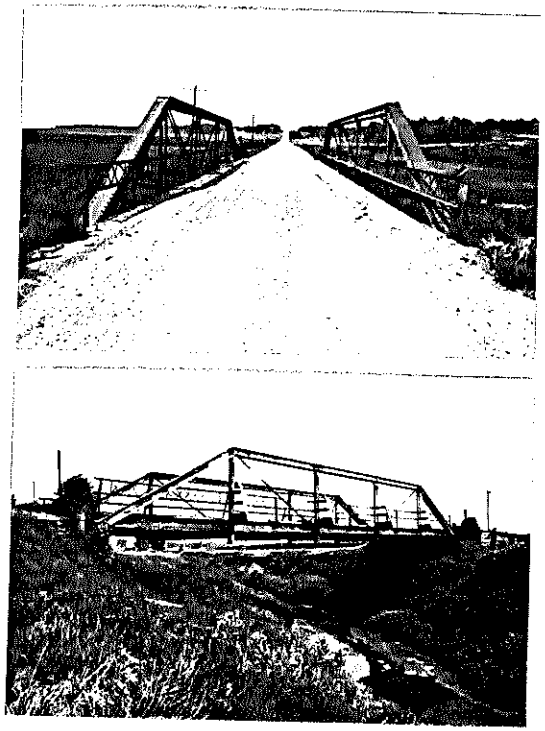
NAME(S) OF STRUCTURE

Plum Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C002011150; Cuming County Supervisors' Record, Books 2 - 4, covering period 1893 to 1920, located at the Cuming County Courthouse, West Point, Nebraska; field inspection by Lon Johnson, July 1989.

INVENTORIED BY	AFFILIATION	DATE
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Plum Creek Bridge
NDOR: C002011755

CUMI07

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
county road over Plum Creek; S16/17, T24N, R5E
5.1 miles northeast of Wisner; Cuming County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 29)

CONDITION
good

OWNER
Cuming County

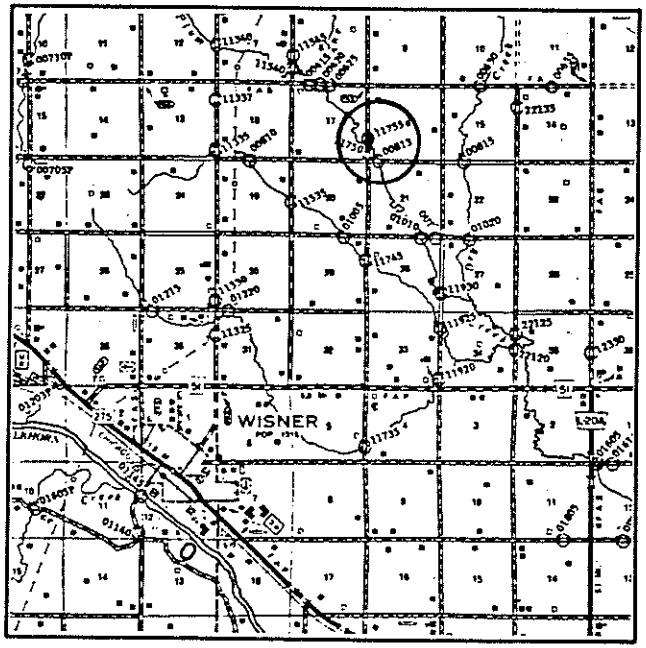
span number:	1	superstructure:	steel, 4-panel, pin- / rigid-connected Pratt pony truss
span length:	50.0'	substructure:	steel I-beam pile bent abutments with timber back- and wingwalls
total length:	51.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	16.0'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 looped eyebars; vertical: 2 pair angles with batten plates; diagonal: eyebars; counter: square eyerod with turnbuckle; lateral bracing: rod with threaded ends; floor beam: I-beam, field bolted to vertical below lower chord; guardrail: lattice

This bridge carries an unpaved county road across Plum Creek five miles northeast of Wisner. The structure is comprised of a four-panel, pin- / rigid-connected Pratt pony truss, which rests on steel piles with timber back- and wingwalls. County records generally fail to list specific bridges in their discussion of bridge work, making definitive identification of this modest structure difficult. Made up of steel components rolled by the Cambria mills in Pittsburgh, this truss was fabricated ca.1915 from a standard design delineated by the Nebraska State Engineer. The Omaha-based Standard Bridge Company held Cuming County's annual bridge building contracts continuously from 1902 through the 1920s and most likely erected this structure. Without major alterations, the Plum Creek Bridge retains an average degree of physical integrity.

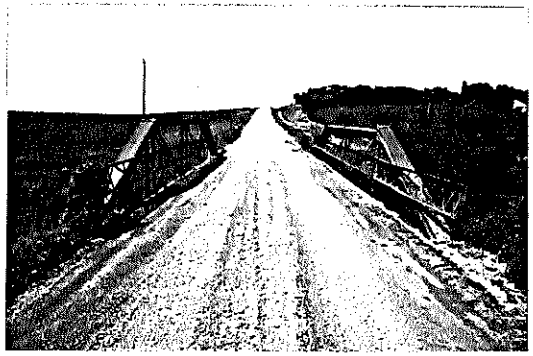
The Plum Creek Bridge is a typically configured example of a common vehicular truss type in Nebraska.

NAME(S) OF STRUCTURE
Plum Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C002011755; Cuming County Supervisors' Record, Books 2 - 4, covering period 1893 to 1920, located at the Cuming County Courthouse, West Point, Nebraska; field inspection by Lon Johnson, July 1989

INVENTORIED BY	AFFILIATION	DATE
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Cuming Creek Bridge
NDOR: C002014440

CUMI08

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
county road over Cuming Creek; S16/21, T21N, R7E
5.8 miles southeast of West Point; Cuming County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 32)

CONDITION
good

OWNER
Cuming County

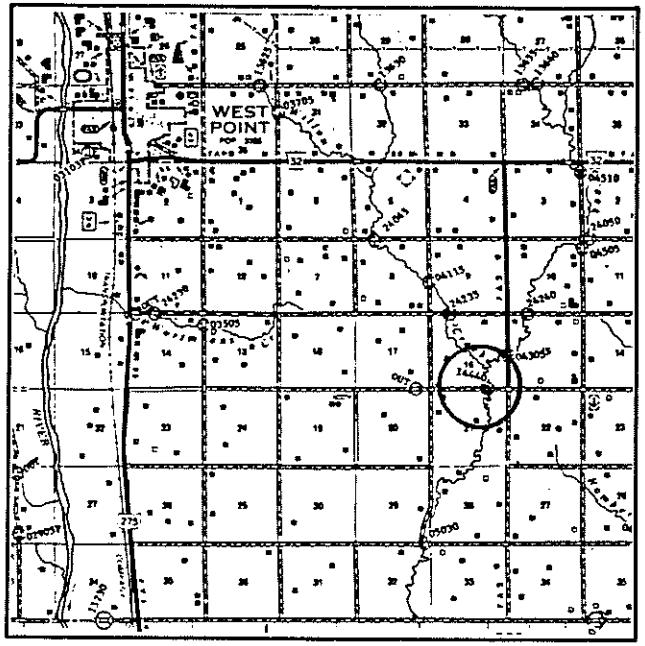
span number:	1	superstructure:	steel, 5-panel, pin- / rigid-connected Pratt pony truss
span length:	70.0'	substructure:	steel I-beam pile bent abutments with timber back- and wingwalls
total length:	71.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	20.0'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 punched eyebars; vertical: 2 pair angles with batten plates; diagonal: eyebars at hips and square rods at middle panels; lateral bracing: rod with threaded ends; floor beam: I-beam, field bolted to vertical below lower chord; guardrail: 2 channels

This bridge carries a secondary county road over Cuming Creek a little less than six miles northeast of West Point. The structure is comprised of a five-panel, pin- / rigid-connected Pratt pony truss, which rests on steel piles with timber back- and wingwalls. County records generally fail to list specific bridges in their discussion of bridge work, making definitive identification of this modest structure difficult. Made up of steel components rolled by the Cambria mills in Pittsburgh, this truss was fabricated ca.1915 from a standard design delineated by the Nebraska State Engineer. The Omaha-based Standard Bridge Company held Cuming County's annual bridge building contracts continuously from 1902 through the 1920s and most likely erected this structure. The Cuming Creek Bridge appears to be unaltered.

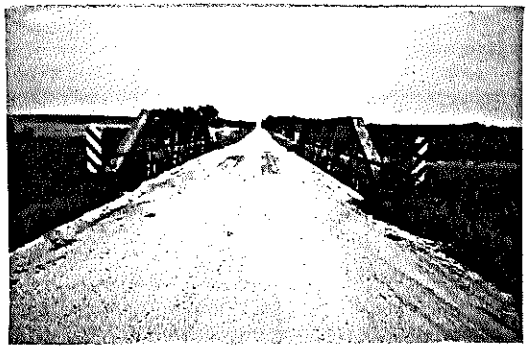
Cuming County began awarding annual bridge construction contracts as early as 1894, and then experimented with building its own bridges in 1900 and 1901. After that, the Standard Bridge Company was awarded the annual bridge contracts through the 1920s. With its construction history largely undocumented, this bridge is an unremarkable example of a common vehicular truss type in Cuming County and Nebraska.

NAME(S) OF STRUCTURE
Cuming Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C002014440; Cuming County Supervisors' Record, Books 2 - 4, covering period 1893 to 1920, located at the Cuming County Courthouse, West Point, Nebraska; field inspection by Lon Johnson, July 1989.

INVENTORIED BY	AFFILIATION	DATE
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Logan Creek Bridge
NDOR: C002014535

CUMI09

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
county road over Logan Creek; S22/23, T24N, R7E
1.8 miles northwest of Bancroft; Cuming County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 25)

CONDITION
poor

OWNER
Cuming County

span number:	2	superstructure:	steel, 5-panel, pinned Pratt pony truss, with riveted Pratt pony truss approach
span length:	70.0'	substructure:	steel pile bent abutments with timber sidewalls; steel pile bent pier with concrete infill
total length:	210.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	16.0'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 punched eyebars; vertical: 2 pair angles with lacing; diagonal: square eyerods; lateral bracing: rod with threaded ends; floor beam: I-beam; guardrail: lattice/ angle

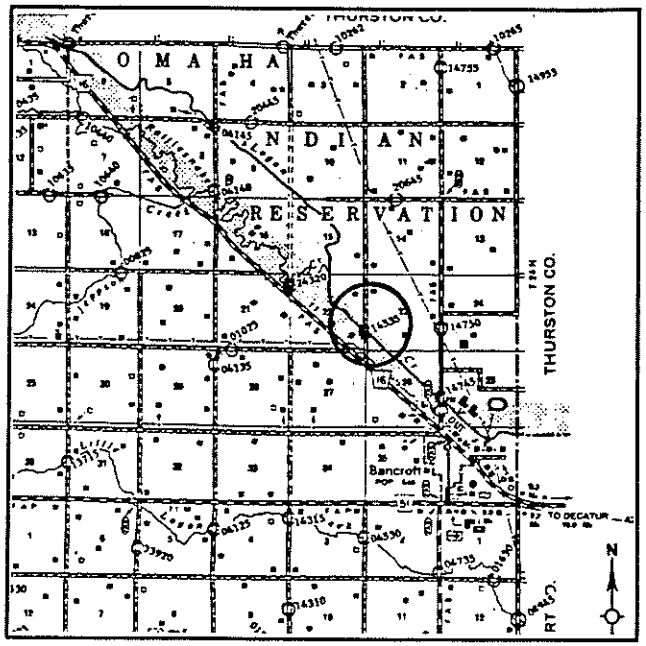
This bridge carries a gravel-surfaced county road across Logan Creek just under two miles northwest of Bancroft in northeastern Cuming County. The structure as originally built was comprised of a slightly skewed, pinned Pratt pony truss with two steel transverse joist girders on the north approach, all supported by a steel pile bent substructure. At a subsequent date a second skewed pony truss was added to the south end of the original truss. Vague county records and the subsequent alterations have made it difficult to document the construction history of this bridge, but the original structure appears to have been erected here ca.1915, probably by the Standard Bridge Company of Omaha, which held Cuming County's annual bridge contracts from 1902 through the 1920s. The second truss appears to have been fabricated ca.1925, but whether it was erected at this location at that time or salvaged later from another site is unknown.

Largely undocumented and substantially altered by the addition of a second truss span, the Logan Creek Bridge lacks any appreciable level of significance or physical integrity.

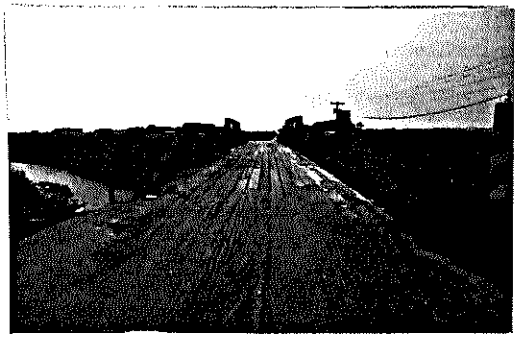
NAME(S) OF STRUCTURE

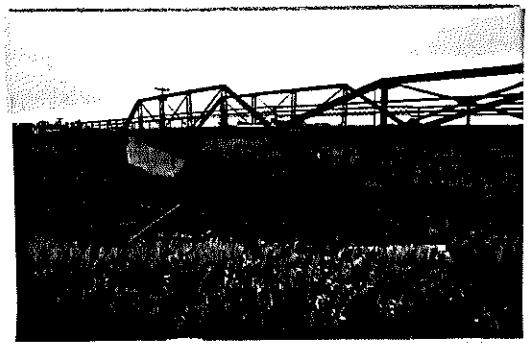
Logan Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C002014535; Cuming County Supervisors' Record, Books 2 - 4, covering period 1893 to 1920, located at the Cuming County Courthouse, West Point, Nebraska; field inventory by Lon Johnson, July 1989.

INVENTORIED BY	AFFILIATION	DATE
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Plum Creek Bridge
NDOR: C002022730

CUMI10

DATE(S) OF CONSTRUCTION
1912

LOCATION
county road over Plum Creek; S19/20, T23N, R6E
2.3 miles northeast of Beemer; Cuming County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 34)

CONDITION
good

OWNER
Cuming County

span number:	1	superstructure:	steel, 5-panel, pin-connected Pratt pony truss
span length:	70.0'	substructure:	steel I-beam pile bent pier and abutments w/ timber back- and wingwalls
total length:	88.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	16.0'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: punched eye-bars; vertical: 2 pair angles with lacing bars; diagonal and counter: square rods; floor beam: I-beam, U-bolted to lower chord pin at vertical; lateral bracing: rod with threaded ends; guardrails: lattice

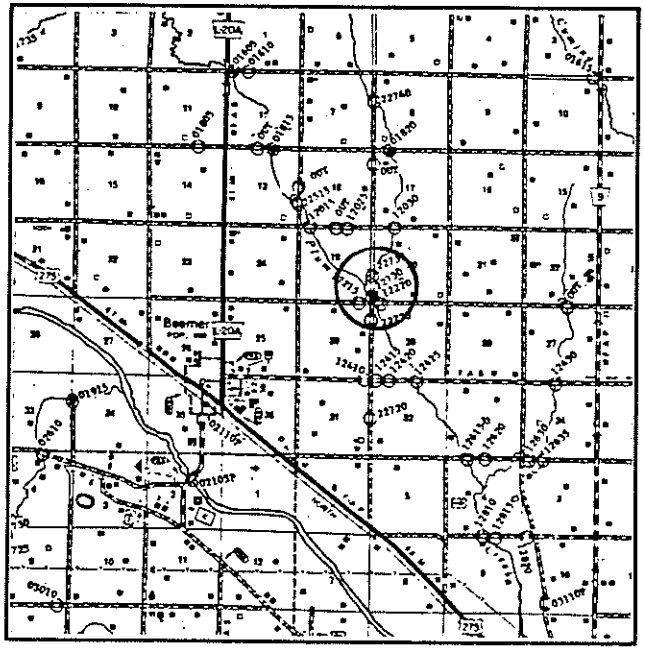
This bridge carries a county road over Plum Creek slightly more than two miles northeast of Beemer in central Cuming County. The structure consists of a five-panel, pin-connected Pratt pony truss, which rests on a substructure of steel pile piers and abutments with timber back- and wingwalls. On May 7, 1912, the Cuming County Board of Supervisors ordered a steel span from the Standard Bridge Company, to be erected at the east side of S19, T23N, R6E. Based in Omaha, Standard Bridge held Cuming County's annual bridge building contracts each year from 1902 to the 1920s. Since its completion later in 1912, this Plum Creek crossing has carried vehicular traffic with partial replacement of its substructure as the only alteration of note.

This bridge is typical of the many small structures built by the counties during the first two decades of this century in response to the public's demand for adequate transportation networks. Unlike may similar structures, the builder and the construction date of this bridge are documented.

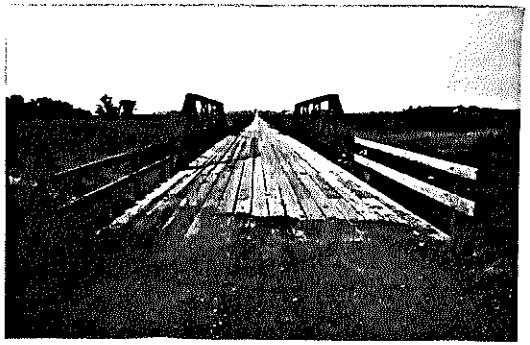
NAME(S) OF STRUCTURE

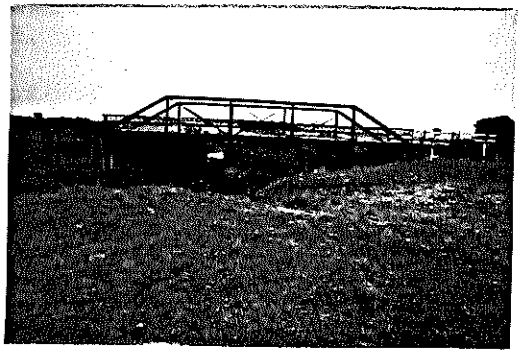
Plum Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C002022730; Cuming County Supervisors' Record, 7 May 1912, located at the Cuming County Courthouse, West Point, Nebraska; field inspection by Lon Johnson, July 1989.

INVENTORIED BY	AFFILIATION	DATE
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Willow Creek Bridge
NDOR: C002024235

CUMI11

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over Willow Creek; S9/16, T21N, R7E
4.7 miles southeast of West Point; Cuming County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 32)

CONDITION
good

OWNER
Cuming County

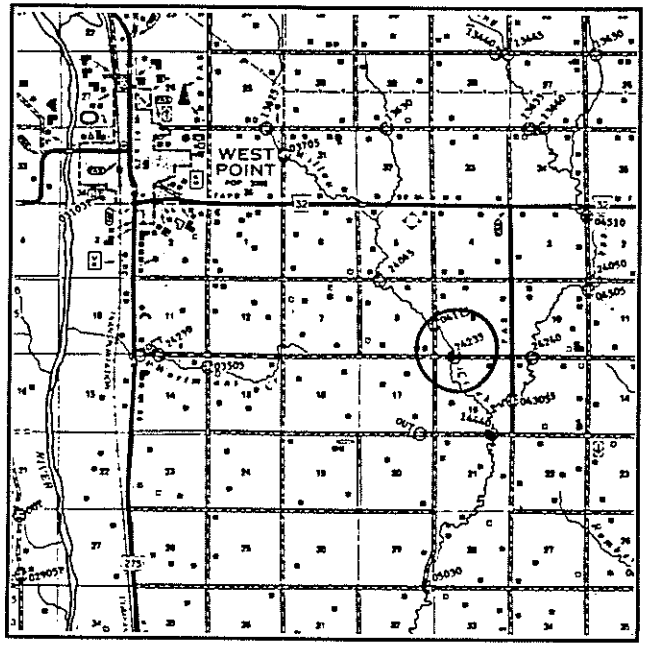
span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt half-hip pony truss
span length:	64.0'	substructure:	steel H-pile bent abutments with timber back- and U-walls
total length:	65.0'	floor/decking:	plank on plank over I-beam stringers
roadway wdt.:	16.0'	other features:	upper chord: 2 channels with cover and batten plates; bottom chord: looped eyebars at hips, punched eyebars at middle panels; vertical: 2 pair angles with batten plates; diagonal: square eyerods; counter: eyerod with turnbuckle; floor beam: I-beam, U-bolted to lower chord pin at vertical; lateral bracing: rod with threaded ends; guardrail: lattice

This bridge carries a gravel-surfaced county road across Willow Creek just under five miles southeast of West Point. The structure is comprised of a four-panel, pin-connected Pratt pony truss with no approach spans. Based on its physical condition and pinned connections, the bridge appears to have been built about 1910. The truss is supported by steel rolled H-pile piers and abutments - a substructure configuration used extensively by the Standard Bridge Company throughout Nebraska from about 1910 to the 1920s. Based in Omaha, Standard Bridge held Cuming County's annual bridge building contract each year from 1902 through the 1920s, so all indications are that this truss was designed and built by that firm. County records generally fail to list specific bridges in their discussion of bridge work, and as a result they do not provide any confirming documentation. Since its completion, this crossing has seen only minor maintenance-related alterations.

Cuming County began awarding annual bridge construction contracts as early as 1894, and then experimented with building its own bridges in 1900 and 1901. After that, the Standard Bridge Company was awarded the annual bridge contracts through the 1920s. With its construction history largely undocumented, this bridge is an unremarkable example of a common vehicular truss type in Cuming County and Nebraska.

NAME(S) OF STRUCTURE
Willow Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C002024235; Cuming County Supervisors' Record, Books 2 - 4, covering period 1893 to 1920, located at the Cuming County Courthouse, West Point, Nebraska; field inspection by Lon Johnson, July 1989.

INVENTORIED BY	AFFILIATION	DATE
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Rattlesnake Creek Bridge
NDOR: C002024320

CUMI12

DATE(S) OF CONSTRUCTION
1903

LOCATION
county road over Rattlesnake Creek; S21/22, T24N, R7E
2.8 miles northwest of Bancroft; Cuming County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 40)

CONDITION
good

OWNER
Cuming County

span number: 1
span length: 60.0'
total length: 92.0'
roadway wdt.: 15.7'

superstructure: steel, 4-panel, pin-connected Pratt half-hip pony truss
substructure: steel I-beam pile abutments with timber back- and wingwalls and I-beam piers
floor/decking: timber deck over transverse I-beam stringers
other features: upper chord: 2 channels with cover and batten plates; bottom chord: 2 looped eyebars; vertical: 2 pair angles with lacing; diagonal: eyebars; counter: eyerod with turnbuckle; stringer: transverse I-beam stringers are bolted to the flanges of larger, longitudinal I-beam stringer and rest on a continuous angle iron bracket, stringers are continuous across approach spans; floor beam: I-beam, field bolted to vertical below lower chord; lateral bracing: rod with threaded ends; guardrail: lattice; endpost-mounted builder's plate: **Standard Bridge Company** (broken)

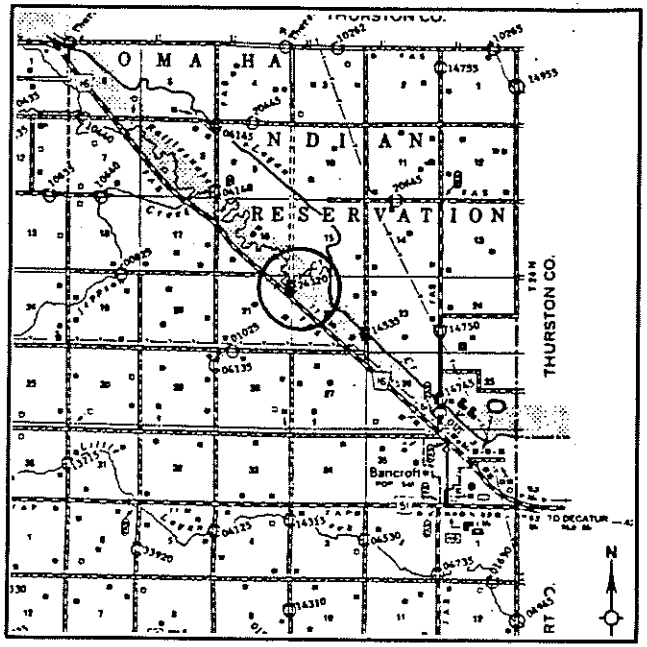
On January 13, 1903, the Cuming County Supervisors awarded an annual bridge construction contract to the Standard Bridge Company of Omaha, a practice they would continue to do each subsequent year until the early 1920s. In 1903 the county undertook an ambitious bridge building program, ordering 60 new or rebuilt bridges. Among the structures constructed that year by Standard Bridge was this pinned Pratt half-hip pony truss. Located northwest of Bancroft, the bridge carries a gravel-surfaced county road over Rattlesnake Creek in northeastern Cuming County. With a documented erection date of 1903, it appears to be the oldest remaining truss from among the dozens built in the county by Standard Bridge during the century's first two decades.

The Standard Bridge Company developed its own designs for the pinned Pratt half-hip pony truss and marketed it extensively during the early 1900s. With annual contracts for eastern Nebraska counties such as Cuming, Wayne, Thurston, Stanton, Dodge and Burt, the firm erected hundreds of half-hip trusses between 1900 and 1920. Many of these remain in place today. The Rattlesnake Creek Bridge is noteworthy as one of the oldest intact examples in Nebraska of this mainstay structural type.

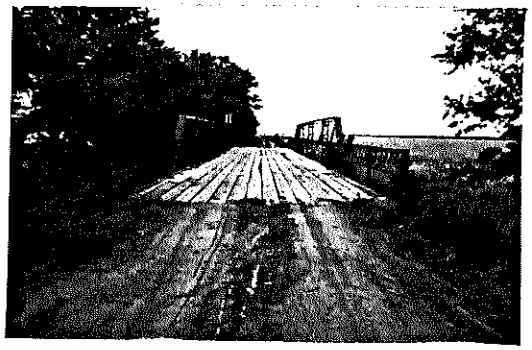
NAME(S) OF STRUCTURE

Rattlesnake Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C002024320; Bridge plate; Cuming County Supervisor's Record, 13 January 1903, located at the Cuming County Courthouse, West Point, Nebraska; field inspection by Lon Johnson, July 1989.

INVENTORIED BY

Lon Johnson, Renewable Technologies, Inc.

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Mud Creek Bridge
NDOR: C002109305P

CUST01

DATE(S) OF CONSTRUCTION
ca.1911

LOCATION
township road over Mud Creek; S15, T15N, R18W
0.5 mile southeast of Ansley; Custer County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially eligible (score: 42)

CONDITION
good

OWNER
Custer County

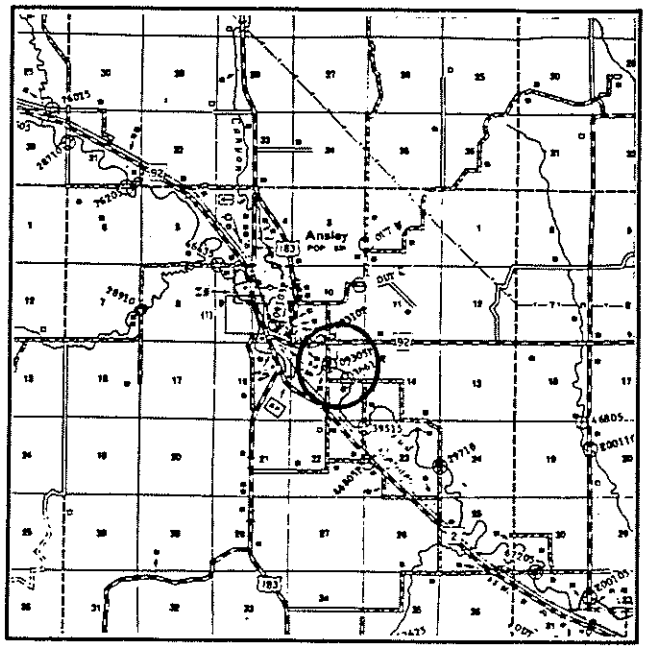
span number:	1	superstructure:	steel, 4-panel, rigid-connected Warren pony truss with steel stringer approach span
span length:	55.0'	substructure:	steel piling encased in concrete
total length:	80.0'	floor/decking:	concrete over deck over I-beam stringers
roadway wdt.:	14.7'	other features:	upper chord: back-to-back channels with cover plate and battens; lower chord: 2 sets of back-to-back angles with battens; vertical: 1 pair of face-to-face angles with battens; diagonal: 1 pair of face-to-face angles with battens; bottom lateral bracing: cross-braced cylindrical eyerod; floor beam: I-beam, bolted by angles to bottom of gusset plate; railing: bar-stock latticework with curved angle-section top

This small-scale bridge carries an unpaved, north-south township road across Mud Creek about one-half mile southeast of Ansley in Section 15, T15N, R18W. The superstructure consists of a rigid-connected Warren pony truss with a steel-stringer approach span on the south end. Both spans are bordered by steel, latticework railings. The abutments consist of steel piling encased in concrete, which flares outward at the northwest, southeast, and southwest approaches to form wingwalls. The northeast wingwall is plank. The single pier is also steel piling in concrete; it has a wingwall on the east end. The bridge shows no evidence of significant alteration. According to the official "Bridge Record" of the county highway department, the Mud Creek Bridge was constructed "about 1911," which was the year the country board adopted its first set of standardized plans for steel bridges. Although county records do not identify the source of the plans, it is possible that they originated in the State Engineer's Office, which prepared a set of standardized bridge plans for county use in 1905. The builder of the Mud Creek Bridge was almost certainly Omaha Structural Steel Works, which held the county's annual contract for erecting steel bridges almost every year between 1911 and 1920.

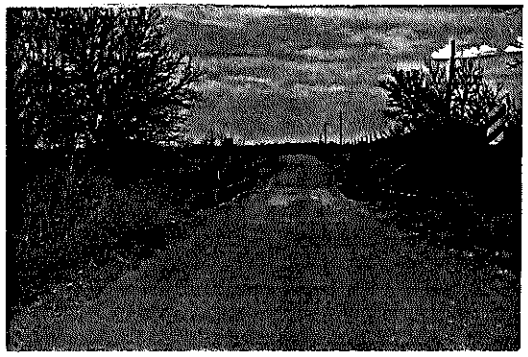
The Mud Creek Bridge is somewhat significant as the earliest known example of standardized, permanent, bridge construction in Custer County. It is also noteworthy as one of some forty surviving Warren pony trusses in the state.

NAME(S) OF STRUCTURE
Mud Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C002109305P; "Bridge Record of [Custer County] Highway Commissioners, in Custer County Highway Department, Broken Bow, Nebraska; Custer County Supervisors' Record, Book 6: 15 April 1908 (page 461), 17 January 1911 (page 139), 28 April 1911 (page 166), 17 February 1912 (page 236); 11 March 1913 (page 308), 12 August 1914 (page 384), 6 April 1915 (page 439), 7 March 1916 (page 501), 24 April 1917 (page 573), 19 February 1918 (page 626), 15 January 1919 (pages 679-680), located in Custer County Courthouse, Broken Bow, Nebraska; **Sixth Biennial Report of the State Engineer, 1905-1906**, pages 11-12; **Seventh Biennial Report of the State Engineer**, 1907-1908, page 183; field inspection by Jeffrey A. Hess, 16 April 1989.

INVENTORIED BY
Jeffrey A. Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Victoria Creek Bridge
NDOR: C002121605P

CUST02

DATE(S) OF CONSTRUCTION
1916

LOCATION
township road over Victoria Creek; S10, T19N, R21W
7.5 miles east, 1 mile north of Anselmo; Custer County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 37)

CONDITION
good

OWNER
Custer County

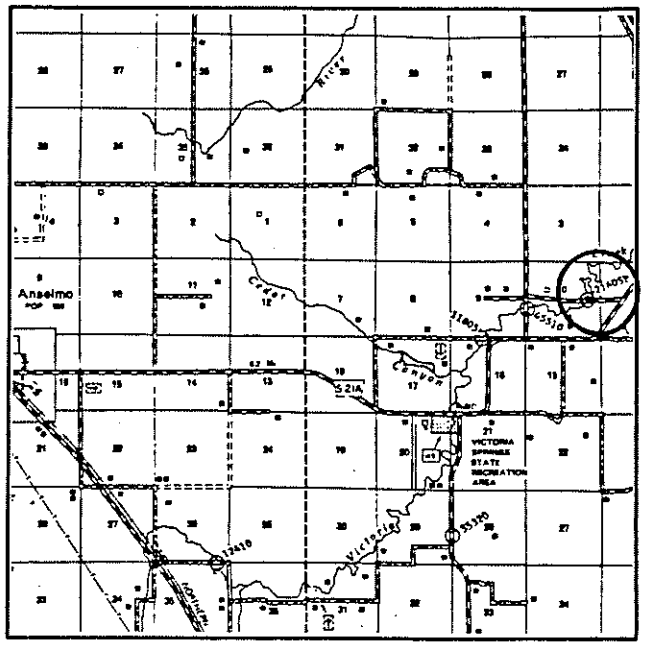
span number:	1	superstructure:	steel, rigid-connected Warren pony truss
span length:	50.0'	substructure:	steel piling encased in concrete
total length:	53.0'	floor/decking:	concrete deck over I-beam stringers
roadway wdt.:	15.0'	other features:	upper chord: back-to-back channels with cover plate and battens; lower chord: 2 sets of back-to-back angles with battens; vertical: 1 pair of face-to-face angles with battens; diagonal: 1 pair of face-to-face angles with battens; floor beam: I-beam, bolted by a riveted angle to gusset plate; bottom lateral bracing: cross-braced cylindrical rod with threaded ends; railing: steel latticework with curved angle section on top

Bordered by steel, latticework railings, this small-scale bridge is a riveted steel Warren pony truss, measuring 53 feet in total length, with a roadway width of about 15 feet. Supported by concrete-encased, steel-pile abutments with flared wingwalls, the bridge carries an unpaved, east-west township road across Victoria Brook about 7.5 miles east of Anselmo in Section 10, T19N, Range 21W. The structure shows no evidence of major alterations. According to the minutes of the Custer County Board of Supervisors, the Victoria Creek Bridge was authorized for construction on April 29, 1916. It was presumably built that same year by Omaha Structural Steel Works, which held the annual contract for erecting steel bridges in Custer County in 1916. The design for the truss was apparently derived from a set of standardized bridge plans adopted by the county board in 1911. As exemplified by a surviving bridge constructed in 1911 (**CUST01**), these plans included Warren pony truss designs. In 1913 the state legislature decreed that county bridge construction should be based upon standardized plans prepared that same year by state engineer's office. Based upon surviving copies in the plan files of the Nebraska Department of Roads, these plans specified Pratt rather than Warren pony trusses. The construction of at least one state-plan Pratt pony truss in Custer County in 1916-1917 (**CUST05**) indicates that the county board was familiar with the new plans. However, the Warren-truss design of the Victoria Creek Bridge suggests that the board was reluctant to give up its 1911 bridge plans completely.

The Victoria Creek Bridge is significant as one of few documented examples among the forty Warren pony trusses remaining in Nebraska.

NAME(S) OF STRUCTURE
Victoria Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C002121605P; Custer County Supervisors' Record, Book 6: 17 January 1911 (page 139), 29 April 1916 (page 511), located in Custer County Courthouse, Broken Bow, Nebraska; **Tenth Biennial Report of the State Board of Irrigation Highways and Drainage**, 1912-14, pages 221-223; Plan No. 292: 4-Panel, 50-Foot, Pin-connected, Pratt Pony Truss, 1913, in Nebraska Department of Roads; field inspection by Jeffrey A. Hess, April 17, 1989.

INVENTORIED BY
Jeffrey A. Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Mud Creek Bridge
NDOR: C002129710

CUST03

DATE(S) OF CONSTRUCTION
ca.1920

LOCATION
township road over Mud Creek; S23/24, T15N, R18W
2 miles north and 2 miles west of Mason City; Custer County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 17)

CONDITION
good

OWNER
Custer County

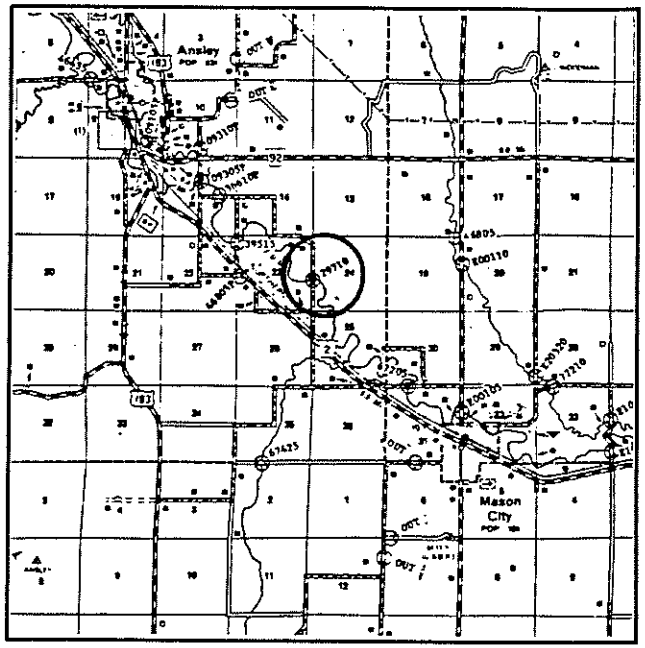
span number:	1	superstructure:	steel, 5-panel, rigid-connected Warren pony truss
span length:	80.0'	substructure:	steel-pile abutments with plank backwall and wingwalls
total length:	81.0'	floor/decking:	concrete deck with concrete curbing, over I-beam stringers
roadway wdt.:	18.8'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: 2 sets of back-to-back angles with battens; vertical: 2 sets of back-to-back angles with battens; diagonal: 2 sets of back-to-back angles with battens; floor beam: I-beam; railing: flexible metal barricade.

Situated two miles north and two miles west of Mason City, this bridge carries an unpaved, north-south township road over Mud Creek. The roadway forms the east-west line between Sections 23 and 24, T15N, R17W. Resting on steel-pile abutments with timber backwall and wingwalls, the single-span superstructure is a steel, rigid-connected Warren pony truss with concrete decking. According to Harry Duryea, Custer County Highway Commissioner, this bridge was moved to its present location from an unknown site. This relocation probably occurred in 1970, since county records note that the steel piling at the site was rebuilt at that time. In 1980, the bridge's I-beam floor beams were strengthened by welding I-beams to the bottom flanges. This alteration adversely affected the bridge's integrity.

The Mud Creek Bridge is one of five Warren pony trusses surviving in Custer County. Since this type is well documented by other bridges of known date and origin in the county, this bridge is not a significant structure.

NAME(S) OF STRUCTURE
Mud Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C002129710; Custer County Supervisors' Record, 1905-1922, located in Custer County Courthouse, Broken Bow, Nebraska; "Bridge Record of [Custer County] Highway Commissioners, located in Custer County Highway Department, Broken Bow, Nebraska; Jeffrey A. Hess, Interview with Harry Duryea, Custer County Highway Superintendent, 17 April 1989; field inspection by Jeffrey A. Hess, 16 April 1989.

INVENTORIED BY
Jeffrey A. Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Mud Creek Bridge
NDOR: C002147620P

CUST04

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
township road over Mud Creek; S11, T14N, R17W
4.5 miles southeast of Mason City; Custer County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 29)

CONDITION
good

OWNER
Custer County

span number:	1	superstructure:	steel, pin-connected, Pratt pony truss with outriders
span length:	50.0'	substructure:	timber piling with plank backwalls and wingwalls
total length:	82.0'	floor/decking:	wood decking over I-beam stringers
roadway wdt.:	16.0'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: paired punched eyebars; vertical: 2 sets of back-to-back angles with battens; diagonal: looped, square-section eyebar with turnbuckle; sway bracing: angle-and-plate outriggers on verticals; bottom-lateral bracing: cross-braced cylindrical eyerod with turnbuckle; floor beam: I-beam, bolted by angles to bottom of vertical; railing: angle posts with channel rails

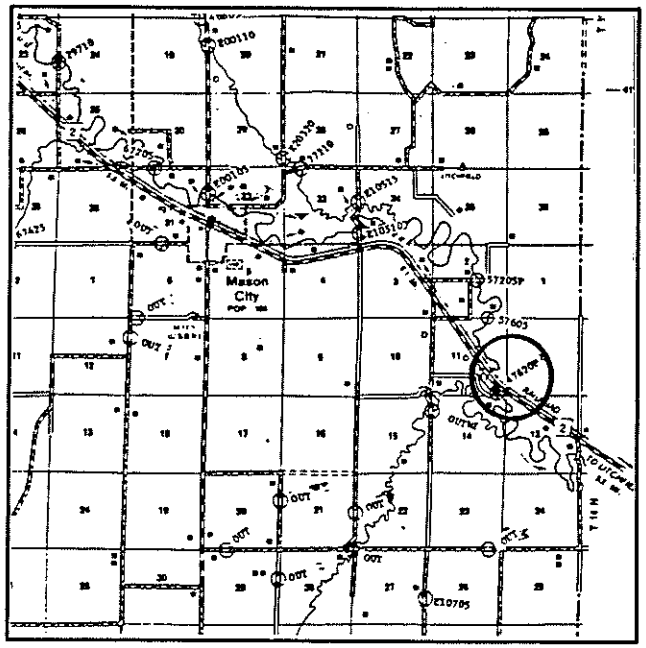
Situated about two miles south and four miles east of Mason City, this bridge carries an unpaved township road over Mud Creek. Supported by timber-pile piers and abutments, the structure consists of a pin-connected Pratt pony truss with a timber-stringer approach span at each end. Although county records do not provide a construction date, the bridge's design apparently was derived from a set of standard plans prepared by the State Engineer's Office in 1913. Since it is known that Custer County built a similar standard-plan Pratt pony truss in 1916-1917, it seems reasonable to assign the Mud Creek Bridge a construction date of ca.1915. The structure was probably erected by Omaha Structural Steel Company, which held the annual contract for building the county's steel bridges for almost every year from 1911 to 1920.

The Mud Creek Bridge is typical of the standardized bridge designs developed by the state engineer's office in 1913 for county use throughout Nebraska, as mandated by the state legislature that same year. This particular bridge type, however, is better represented by other surviving examples with documented construction dates and builders.

NAME(S) OF STRUCTURE

Mud Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C002147620P; Custer County Supervisors Record, Book 6: 17 January 1911 (page 139), 28 April 1911 (page 166), 17 February 1912 (page 236), 11 March 1913 (page 308), 12 August 1914 (page 384), 6 April 1915 (page 439), 7 March 1916 (page 501), 24 April 1917 (page 573), 19 February 1918 (page 626), 15 January 1919 (pages 679-680), located in Custer County Courthouse, Broken Bow, Nebraska; **Tenth Biennial Report of the State Board of Irrigation Highways and Drainage**, 1912-14, pages 222-223; field inspection by Jeffrey A. Hess, 16 April 1989.

INVENTORIED BY

Jeffrey A. Hess

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
John Ausberry Bridge
NDOR: C002167205

CUST05

DATE(S) OF CONSTRUCTION
1916-17

LOCATION
township road over Mud Creek; S 30/31, T15N, R17W
0.7 mile northwest of Mason City; Custer County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 33)

CONDITION
good

OWNER
Custer County

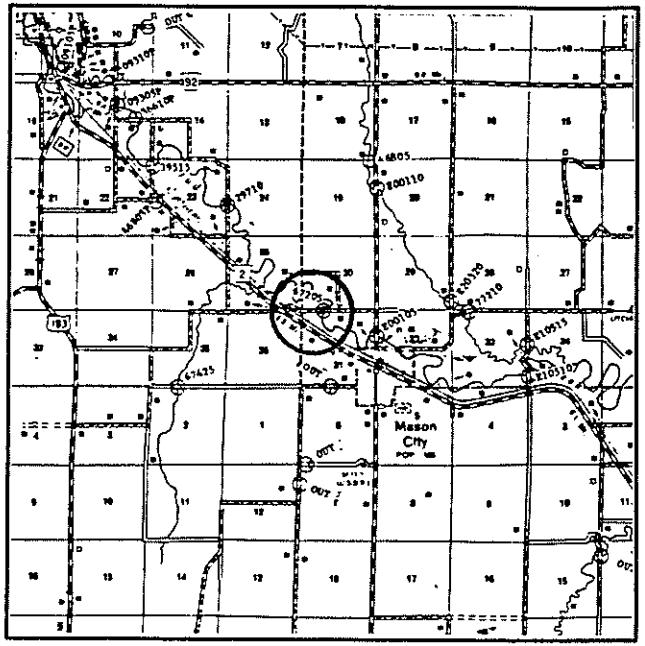
span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt pony truss
span length:	50.0'	substructure:	concrete abutments with flared concrete and timber plank wingwalls
total length:	52.0'	floor/decking:	concrete deck over I-beam stringers
roadway wdt.:	14.8'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: paired punched eyebars; vertical: 2 sets of back-to-back angles with battens; diagonal: punched eyebars; counter: looped cylindrical eyerods with turnbuckles; sway bracing: angle-and-plate outriggers on verticals; bottom-lateral bracing: cross-braced cylindrical eyerod with turnbuckle; floor beam: I-beam bolted by angle to bottom of vertical; railing: angle posts with channel rails

Situated about one mile northwest of Mason City, this bridge carries an unpaved, east-west township road over Mud Creek between Sections 30 and 31, T15N, R17W. Resting on concrete abutments, the single-span superstructure is a pin-connected Pratt pony truss with a concrete deck and an approximately 15-foot-wide roadway. According to the minutes of the Custer County Board of Supervisors, the bridge was authorized for construction on April 29, 1916. The county's official "Bridge Record" notes a completion date of 1917; the same source also refers to the structure as "John Ausberry Bridge," presumably named after a nearby resident. Since Omaha Structural Steel Works held the county's annual contract for building steel bridges in both 1916 and 1917, it undoubtedly erected the structure. The bridge's design apparently was derived from a set of standard plans prepared by the Nebraska Bureau of Roads and Bridges in 1913.

A relatively well-preserved example of a Pratt pony truss, the Mud Creek Bridge is typical of the standardized bridge designs developed by the state engineer's office in 1913 for county use throughout Nebraska, as mandated by the state legislature that same year. This particular structural type is well documented by other surviving examples in Nebraska. In terms of Custer County, the most significant truss type is the Warren pony truss. Standardized by the county board in 1911, the Warren pony truss ushered in the period of permanent steel bridge construction in Custer County. Although the type is uncommon in the rest of Nebraska, Custer County has five surviving examples.

NAME(S) OF STRUCTURE
John Ausberry Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C002167205; Custer County Supervisors Record, Book 6: 17 January 1911 (page 139), 29 April 1916 (pages 501, 511), 24 April 1917 (page 573), located in Custer County Courthouse, Broken Bow, Nebraska; "Bridge Record of [Custer County] Highway Commissioners, located in Custer County Highway Department, Broken Bow, Nebraska; **Tenth Biennial Report of the State Board of Irrigation Highways and Drainage**, 1912-14, pages 222-223; Nebraska State Engineer's Office, Bridge Plan No. 292, 1913, in Bridge Division, Nebraska Department of Roads, Lincoln; field inspection by Jeffrey A. Hess, 16 April 1989.

INVENTORIED BY
Jeffrey A. Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Mud Creek Bridge
NDOR: C002176010

CUST06

DATE(S) OF CONSTRUCTION
ca.1911-17

LOCATION
township road over Mud Creek; S26/35, T16N, R19W
1.5 miles south and 1.5 miles east of Berwyn; Custer County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 33)

CONDITION
good

OWNER
Custer County

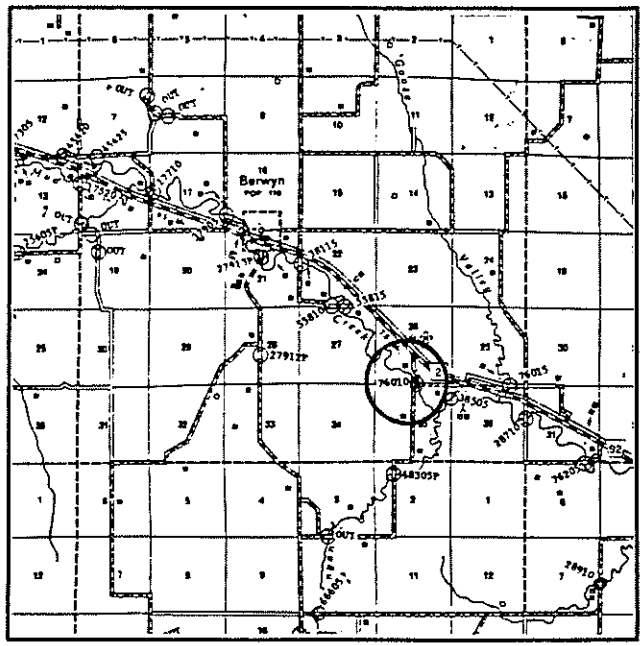
span number:	1	superstructure:	steel, 3-panel, rigid-connected Warren pony truss
span length:	40.0'	substructure:	steel piling abutments encased in concrete; flared wingwalls
total length:	41.0'	floor/decking:	concrete decking with concrete curbing, over I-beam stringers
roadway wdt.:	14.8'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: back-to-back angles with battens; vertical: 2 sets of back-to-back angles with battens; diagonal: 1 pair of face-to-face angles with battens; bottom lateral bracing: cross-braced cylindrical eyerods with threaded ends; floor beam: I-beam, bolted to bottom of vertical; railing: steel bar-stock latticework with curved angle-section top

This bridge carries an unpaved, east-west township road across Mud Creek about one-and-one-half miles southeast of Berwyn between Sections 26 and 35, T16N, R19W. Resting on abutments of steel-piling encased in concrete, the single-span steel superstructure consists of a riveted Warren pony truss with an approximately 15-foot-wide roadway bordered by a latticework steel railing. Although county records provide no specific information on the bridge's construction, they do establish that bridges of similar design were erected in Custer County in 1911 and 1917. It therefore seems reasonable to assign the Mud Creek Bridge a construction date within this time frame. For almost every year during this period, Omaha Structural Steel Works held the county's annual contract for erecting steel bridges.

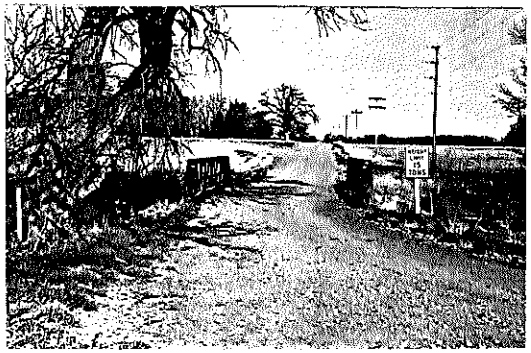
The Mud Creek Bridge is typical of Warren pony truss construction in Custer County before 1920. The type, however, is better represented by surviving bridges in the county with documented dates of construction.

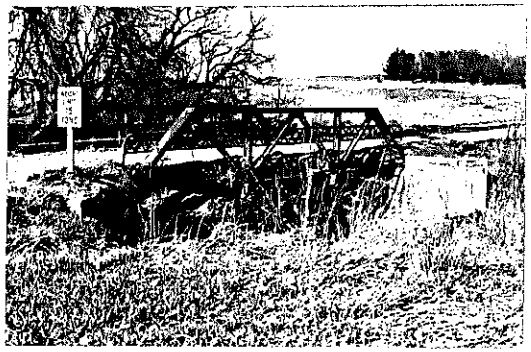
NAME(S) OF STRUCTURE
Mud Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C002176010; "Bridge Record of [Custer County] Highway Commissioners, in Custer County Highway Department, Broken Bow, Nebraska; Custer County Supervisors' Record, 1905-22, located in Custer County Courthouse, Broken Bow, Nebraska; field inspection by Jeffrey A. Hess, 16 April 1989.

INVENTORIED BY	AFFILIATION	DATE
Jeffrey A. Hess	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C0E2100110

CUST07

DATE(S) OF CONSTRUCTION
1934

LOCATION
Federal Aid System Highway 1875 over gully; S19/20, T15N, R17W
2 miles north of Mason City; Custer County, Nebraska

USE (ORIGINAL / CURRENT)
highway bridge / roadway bridge

RATING NRHP non-eligible (score: 24)

CONDITION
good

OWNER
Custer County

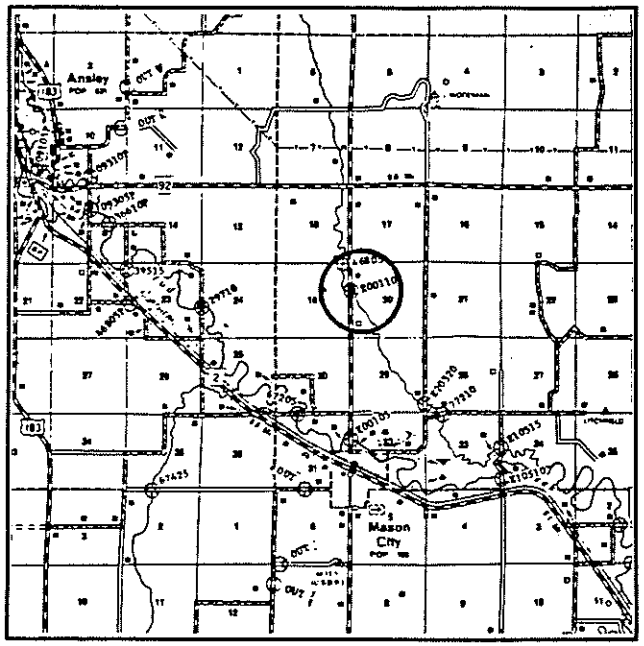
span number:	1	superstructure:	concrete slab
span length:	47.0'	substructure:	reinforced-concrete beam on wood piling with plank backwalls and wingwalls
total length:	49.0'	floor/decking:	concrete decking with stepped concrete curb
roadway wdt.:	21.0'	other features:	railing: angle posts and rails attached to concrete curbing; plate on southwest and northeast corners: **Capacity 10 Tons 364-A1-1934**

This bridge carries a paved north-south county road over a gully about two miles north of Mason City. The roadway marks the east-west line between Sections 19 and 20, T15N, R17W. Designed and built by the Nebraska Department of Roads in 1934, the bridge is a 50-foot concrete slab on concrete-capped wood-pile abutments.

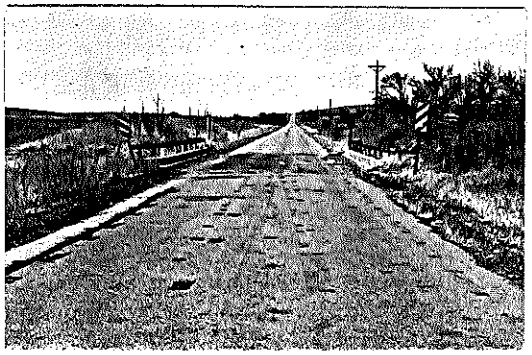
In its biennial report for 1931-1932, the Nebraska Bureau of Roads and Bridges reported that it had adopted a new low-cost bridge type consisting of a concrete slab with a substructure of creosoted timber piling capped with a reinforced concrete beam. As the report explained, "These structures are generally used as overflow bridges where the wide low valley of a drainage way is subject to overflow with a discharge beyond the capacity of the central natural channel... These slab structures may also serve in locations where, before their advent, it was customary to use concrete box culverts." During its first five years of use, the design became the agency's most popular bridge type, accounting for approximately 30 percent of state-designed bridges. With its 50-foot span, the Mud Creek Bridge represents the upper-length limit of the design.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C0E2100110; Department of Public Works, **Nineteenth Biennial Report**, 1931-32, pages 74-75; Department of Roads and Irrigation, **Twentieth Biennial Report**, 1933-34, pages 80-84; Department of Roads and Irrigation, **Twenty-First Biennial Report**, 1935-36, pages 119-121; "Bridge Record of [Custer County] Highway Commissioners, located in Custer County Highway Department, Broken Bow, Nebraska; field inspection by Jeffrey A. Hess, 16 April 1989.

INVENTORIED BY
Jeffrey A. Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Ansley Dump Bridge
NDOR: U0075A9105

CUST08

DATE(S) OF CONSTRUCTION
1912; moved 1938

LOCATION
Dawson Street over Mud Creek; S9, T15N, R18W
Ansley; Custer County, Nebraska

USE (ORIGINAL / CURRENT)
city street bridge / city street bridge

RATING NRHP non-eligible (score: 32)

CONDITION
good

OWNER
Town of Ansley

span number:	1	superstructure:	steel, rigid-connected Warren pony truss with steel stringer approach span
span length:	75.0'	substructure:	steel piling with plank backwalls and wingwalls
total length:	77.0'	floor/decking:	concrete over I-beam stringers
roadway wdt.:	14.8'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: 2 sets of back-to-back angles with battens; vertical: 2 sets of back-to-back angles with battens; diagonal: 2 sets of back-to-back angles with battens; bottom lateral bracing: cross-braced cylindrical eyerod with threaded ends; floor beam: I-beam, bolted by angle to bottom of vertical; railing: steel, bar-stock latticework

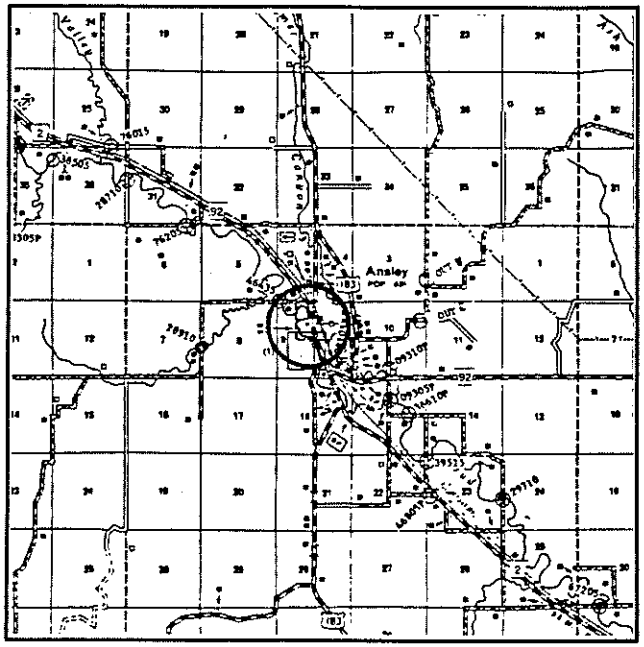
The Ansley Dump Bridge carries an unpaved municipal road over Mud Creek in the southwest corner of Ansley. The single-span steel superstructure consists of a rigid-connected Warren pony truss with an approximately 15-foot-wide roadway bordered by steel latticework railings. Prior to 1958, the bridge was state-owned, as part of U.S. Highway 183. When this route was realigned to the east that year, the bridge was taken over by the Town of Ansley. State records suggest a construction date of 1938; county records, 1912. Judging from other surviving Warren pony trusses in Custer County, the bridge's superstructure design is compatible with the earlier date, but its open steel-pile abutment design is not. Pre-1920 steel pony trusses in Custer County seem to have been built with abutments of concrete-encased steel piling. The two dates can be reconciled by hypothesizing that the bridge was moved to the Dawson Street site in 1938, at which time the present abutments were constructed.

The bridge's Warren pony truss design is better represented by other surviving Custer County examples with better integrity and documented construction dates.

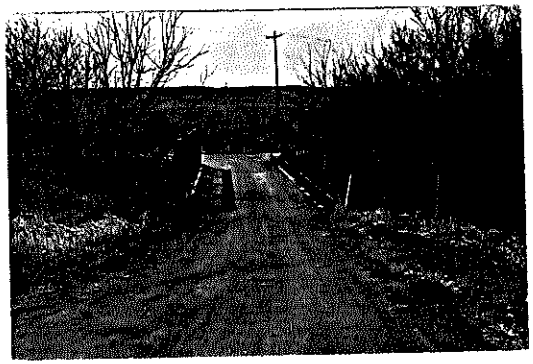
NAME(S) OF STRUCTURE

Ansley Dump Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number U0075A9105; "Bridge Record of [Custer County] Highway Commissioners, in Custer County Highway Department, Broken Bow, Nebraska; Custer County Supervisors' Record, 1905-22); Index Card for Bridge No. 7181, Old State Bridge File, in Nebraska Department of Roads, Lincoln, Nebraska; field inspection by Jeffrey A. Hess, 16 April 1989.

INVENTORIED BY	AFFILIATION	DATE
Jeffrey A. Hess	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Sargent Bridge
NDOR: none

CUST09

DATE(S) OF CONSTRUCTION
1908

LOCATION
Dawson Street over the Middle Loup River; S10, T19N, R18W
1 mile south of Sargent; Custer County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP eligible (score: 60)

CONDITION
poor

OWNER
Middle Loup Irrigation District

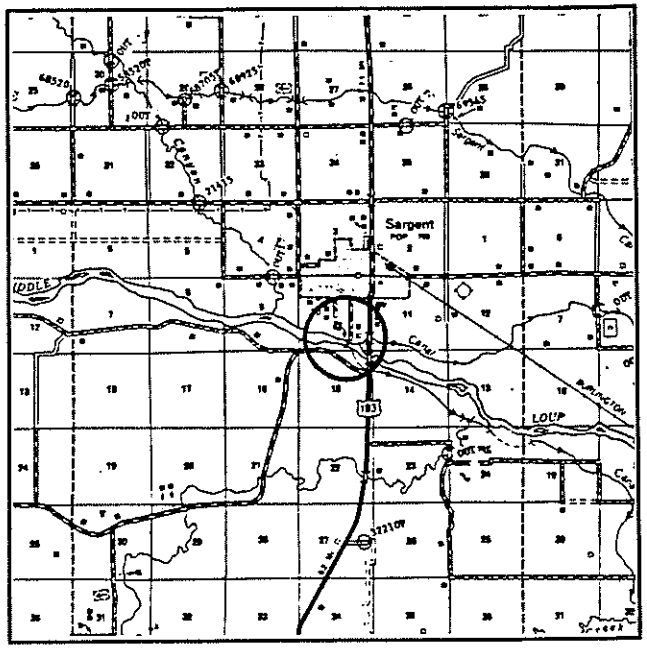
span number:	2	superstructure:	steel, pin-connected, 6-panel Pratt through truss, with timber stringer approaches
span length:	120.0'	substructure:	wood-pile abutments with plank backwalls and wingwalls; tubular steel piers
total length:	unknown	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	unknown	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: paired, punched eyebars; hip vertical: square-section, looped eyerods; vertical: 2 back-to-back channels with lacing; diagonal: paired punched eyebars in end panels, paired looped square-section eyerods in middle panels; counter: 1 looped square-section eyerod with turnbuckle; portal bracing: back-to-back angles; overhead sway bracing: back-to-back angles with lacing; bottom- and top-lateral bracing: cross-braced cylindrical eyerods; floor beam: I-beam; railing: gaspipe (except north approach span, which has wood railing)

Situated about one mile south of Sargent, the Sargent Bridge carries an unpaved private road across the Middle Loup River, linking the north shore to an earth-fill, diversion, dam owned by the Middle Loup Irrigation District. According to the board minutes of the Custer County Supervisors, the bridge was built in 1908 by Standard Bridge Company of Omaha, low bidder at $4,556.64. The original plans and specifications, prepared by the State Engineer's Office, called for two, steel, 120-foot, pin-connected Pratt through trusses on tubular steel piers. Apparently, there was no provision for approach spans, the state engineer specifying instead 680 feet of fill "heading to the proposed bridge." At an undetermined date, two timber-stringer approach spans on timber-pile abutments were constructed, one at each end of the truss spans. In 1920 the county board petitioned the state highway authorities to use the State Aid Bridge Fund to rebuild the Sargent Bridge, then part of State Highway 63, "to conform to [prevailing] specifications of the Federal and State Highway Departments." Although funds were never made available for that purpose, the bridge eventually was taken over by the state and incorporated into U.S. Highway 183. In the 1960s, after U.S. Highway 183 was realigned to the east, the bridge was abandoned as a public thoroughfare and acquired by the Middle Loup Irrigation District, which currently maintains the structure as a private access to its diversion dam. Although a counter in the east web of the north truss has snapped, the bridge's overall design integrity remains high.

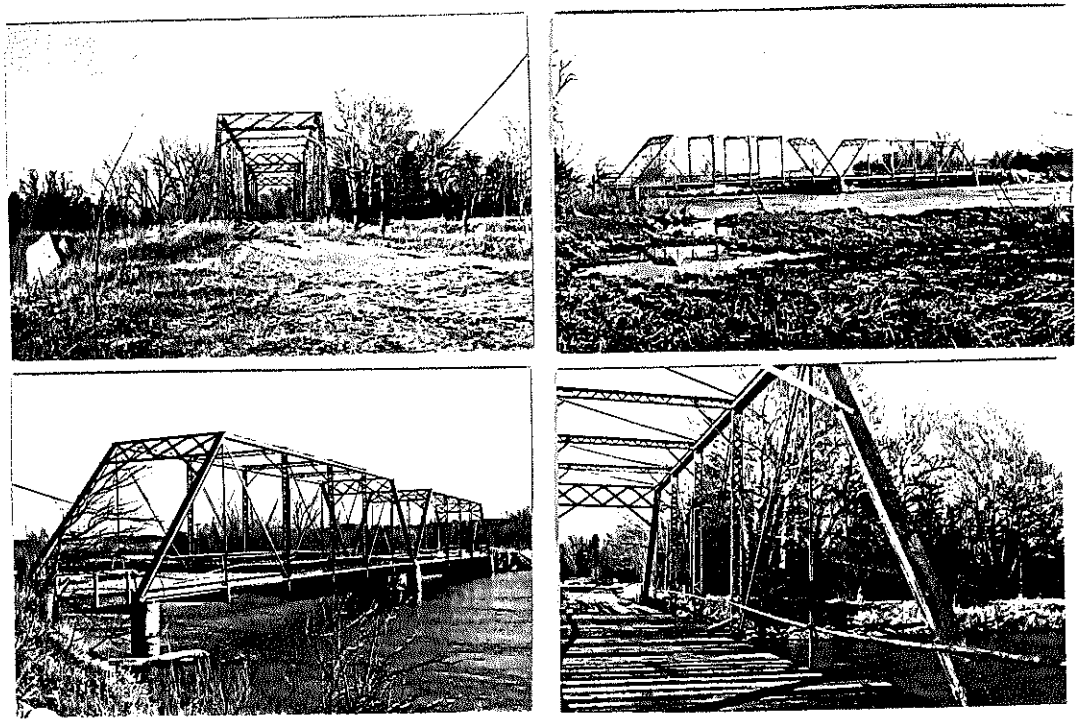
Constructed in 1908, the Sargent Bridge is significant as one of the few surviving early-twentieth-century, through-truss bridges in central Nebraska. Its significance is enhanced by its multiple-span configuration, and by the fact that it embodies one of the oldest surviving plans of the State Engineer's Office. In terms of local history, the bridge is important as a major river crossing that served as a gateway to the City of Sargent for over half a century.

NAME(S) OF STRUCTURE
Sargent Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
"Bridge Record of [Custer County] Highway Commissioners, in Custer County Highway Department, Broken Bow, Nebraska; Custer County Supervisors' Record, Book 6: 15 April 1908 (pages 461-62), 12 June 1908 (pages 481-82), 14 November 1908 (page 543); Book 7: 21 January 1920 (page 29); Jeffrey A. Hess, interview with Harry Duryea, Custer County Highway Superintendent, 2 January 1991; field inspection by Jeffrey A. Hess, 17 April 1989.

INVENTORIED BY
Jeffrey A. Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Simmons Bridge
NDOR: C00200905P

DAKO01

DATE(S) OF CONSTRUCTION
1913

LOCATION
county road over unnamed stream; S8, T27N, R7E
7.2 miles west of Homer; Dakota County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 27)

CONDITION
good

OWNER
Dakota County

span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt pony truss
span length:	50.0'	substructure:	steel pile bent abutments and pier with concrete and sheet piling wingwalls
total length:	80.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.5'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 punched eyebars; vertical: 2 pair angles with batten plates; diagonal: punched eyebars; sway bracing: angle knee braces; floor beam: I-beam; lateral bracing: rod with threaded ends; guardrail: pipe (main span) 2 channels (approach span)

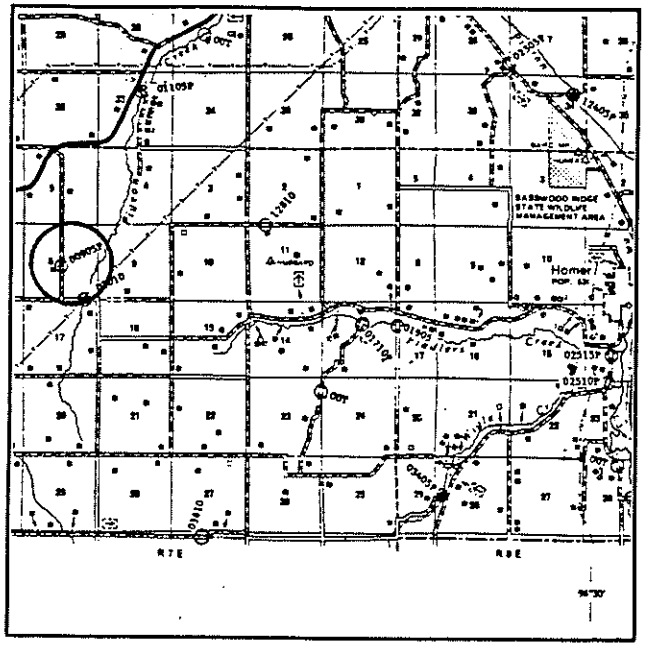
Each year from 1907 through the 1920s, Dakota County awarded its annual bridge construction contract to Eugene S. Beaty, a regionally prominent bridge builder from Blair, Nebraska. This truss over an intermittent stream west of Homer was among the numerous small-scale trusses Beaty built in the county during this period. Known locally as the Simmons Bridge, the structure consists of a three-panel, pin-connected Pratt pony truss with outriders, supported by steel pile bent piers and abutments with concrete back- and wingwalls (recently repaired with steel sheet piling). Using a standard design promulgated by the state engineer's office, Beaty erected the bridge in the fall of 1913. On November 24, 1913, when it had been completed, Beaty was paid $2161.10 for building this bridge. The structure has since carried vehicular traffic with replacement of part of the original substructure as the only alteration of note.

The Simmons Bridge is typical of the many small structures built by the counties during the first quarter of this century in response to the public's demand for adequate transportation networks. Unlike many similar structures in Nebraska, the builder and construction date of this bridge are documented, but this does not translate into historical significance. The Simmons Bridge is a typically configured example of an exceedingly common structural type.

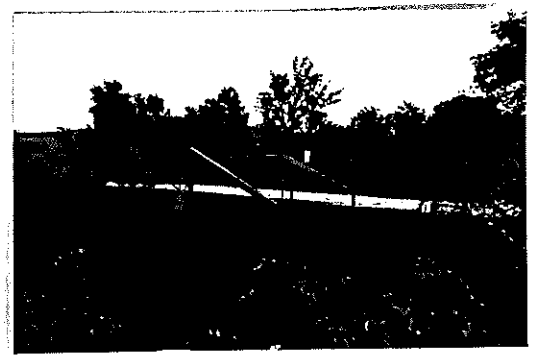
NAME(S) OF STRUCTURE

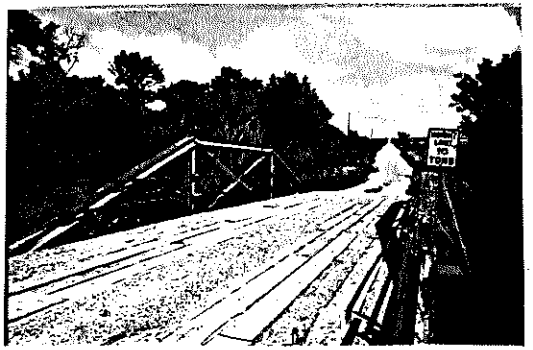
Simmons Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C00200905P; Dakota County Commissioners' Record, Book F: 24 November 1913, located at the Dakota County Courthouse, Dakota City, Nebraska; field inspection by Fred Quivik, 22 July 1989.

INVENTORIED BY	AFFILIATION	DATE
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Rasmussen Bridge
NDOR: C002201005P

DAKO02

DATE(S) OF CONSTRUCTION
1914

LOCATION
county road over unnamed stream; SW1/4 S30, T29N, R7E
4.6 miles west of Jackson; Dakota County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 27)

CONDITION
good

OWNER
Dakota County

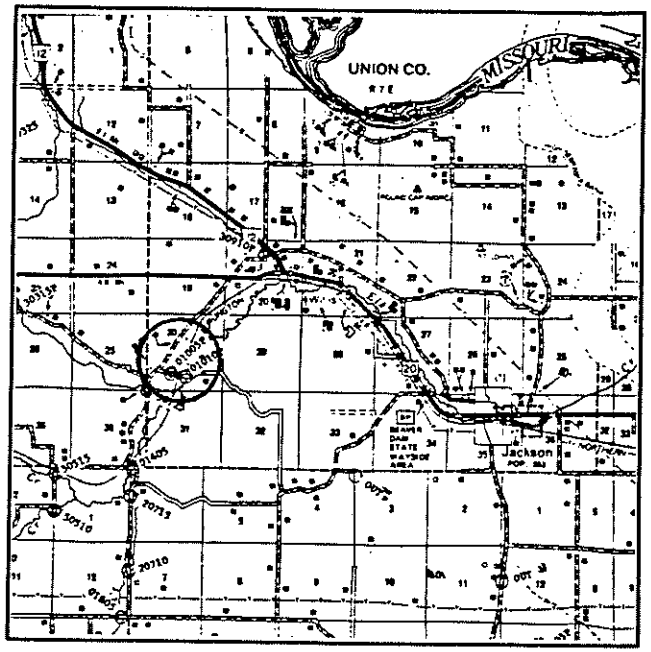
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt pony truss
span length:	50.0'	substructure:	H-beam pile bent abutments with timber back- and wingwalls
total length:	51.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	15.6'	other features:	upper chord: 2 channels with cover plate and batten plates; lower cord: looped eyebars; vertical: 2 pair angles with lacing; diagonal: eyerods; floor beam: I-beam, field bolted to vertical below lower chord; lateral bracing: rod with threaded ends; guardrail: missing

Each year from 1907 through the 1920s, Dakota County awarded its annual bridge construction contract to Eugene S. Beaty, a regionally prominent bridge builder from Blair, Nebraska. This truss over an intermittent stream west of Jackson was among the numerous small-scale trusses Beaty built in the county during this period. Known locally as the Rasmussen Bridge, the structure consists of a three-panel, pin-connected Pratt pony truss, supported by rolled H-pile abutments with timber back and wingwalls. Beaty erected the bridge in the summer of 1914, using a state-developed design. On September 8, 1914, when the bridge had been completed, Beaty was paid $2267.69, plus an additional $753.60 for work on the abutments. The structure appears to have carried vehicular traffic over the years without major alteration.

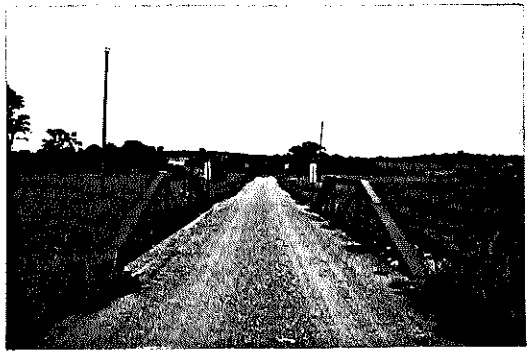
The Rasmussen Bridge is typical of the many small structures built by the counties during the first quarter of this century in response to the public's demand for adequate transportation networks. Unlike many similar structures in Nebraska, the builder and construction date of this bridge are documented, but this does not translate into historical significance. The Rasmussen Bridge is a typically configured example of an exceedingly common structural type.

NAME(S) OF STRUCTURE
Rasmussen Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C002201005P; Dakota County Commissioners' Record, Book 8, 8 September 1914, located at the Dakota County Courthouse, Dakota City, Nebraska; field inspection by Fred Quivik, 22 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Elk Creek Bridge
NDOR: C002202605

DAKO03

DATE(S) OF CONSTRUCTION
ca.1905

LOCATION
county road over Elk Creek; S1/36, T27/28N, R6E
5.0 miles southwest of Hubbard; Dakota County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / abandoned

RATING NRHP non-eligible (score: 26)

CONDITION
fair

OWNER
Dakota County

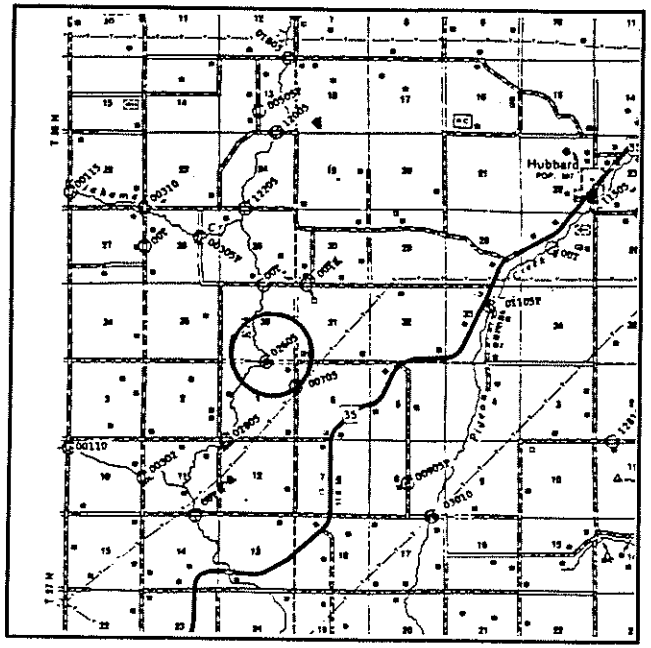
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt half-hip pony truss
span length:	50.0'	substructure:	steel pile bent abutments and pier, with timber back- and wingwalls
total length:	72.0'	floor/decking:	timber deck (removed) over steel stringers
roadway wdt.:	15.8'	other features:	upper chord: 2 channels with cover plate and batten plates; lower chord: 2 looped eyebars; vertical: 2 pair angles with lacing; diagonal: 2 looped eyebars; counter: eyerod with turnbuckle; floor beam: I-beam, field bolted to vertical below lower chord; lateral bracing: rod with threaded ends; guardrail: missing

This small structure spans Elk Creek five miles southwest of Hubbard in southwestern Dakota County. A pin-connected Pratt half-hip pony truss, the bridge rests on steel pile bent abutments with timber back and wingwalls. The truss's deck has been removed, and the crossing has been closed to traffic for some time. County commissioners minutes seldom refer to the construction of individual bridges, making definitive identification of this bridge impossible. Based on the structure's physical appearance, half-hip design, and pinned connections, it appears to date to circa 1905, during a period in which the Canton Bridge Company of Canton, Ohio, held Dakota County's annual bridge building contracts. This bridge displays the earmarks of a Canton-built structure. Although the decking has been removed, the truss remains otherwise intact.

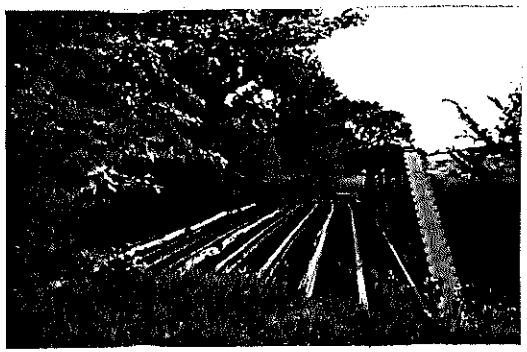
The Canton Bridge Company, like many midwestern bridge erectors, marketed the Pratt half-hip pony truss extensively in the early 1900s. Lacking a vertical at the hip connection, it was slightly lighter - and thus cheaper to fabricate - than the standard Pratt truss. The state engineer's office did not adopt the half-hip design as a state standard, however, and as the counties began using the state standards increasingly in the mid-1910s, erection of half-hip ponies decreased rapidly. Nevertheless, numerous half-hip trusses remain on use on Nebraska's secondary roads today. With its construction history largely undocumented, the Elk Creek Bridge is not one of the more noteworthy examples.

NAME(S) OF STRUCTURE
Elk Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C002202605; Dakota County Commissioners' Record, Books E and F, covering the period 1898 to 1920; field inspection by Fred Quivik, 22 July 1989.

INVENTORIED BY	AFFILIATION	DATE
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Johnson/Ronnfeldt Bridge
NDOR: C002203010

DAKO04

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over Pigeon Creek; S8/17, T27N, R7E
7.0 miles south-southwest of Hubbard; Dakota County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 25)

CONDITION
good

OWNER
Dakota County

span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt pony truss
span length:	40.0'	substructure:	steel H-beam pile bent pier and abutments with timber back- and wingwalls
total length:	60.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.8'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 punched eyebars; vertical: 2 angles with batten plates; diagonal: eyerods; floor beam: I-beam, field bolted above lower chord; lateral bracing: rod with threaded ends; guardrail: 2 channels

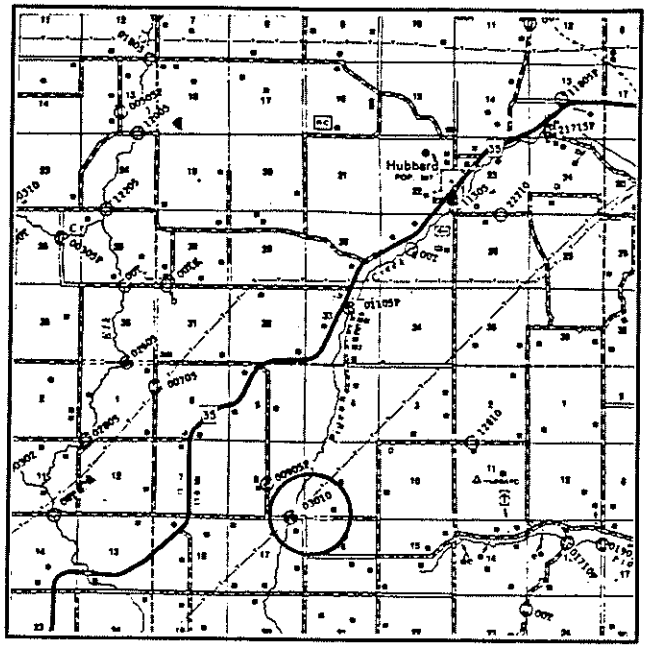
In their discussion of bridge work, Dakota County Commissioners' minutes seldom refer to the construction of specific bridges, making definitive identification difficult. Such is the case with this small-scale structure which spans Pigeon Creek in southwestern Dakota County. A three-panel, pinned Pratt pony truss, the bridge is characteristic of truss bridge construction around 1910. From 1907 through the 1920s, the annual bridge construction contacts for Dakota County were held by E.S. (Eugene) Beaty of Blair, Nebraska. Known locally as the Johnson/Ronnfeldt Bridge, this bridge appears to have carried vehicular traffic over the years without major alteration.

In the late 1890s, most of the bridge construction in Dakota was undertaken by local contractors under contract with the county commissioners. J.R. Sheeley of Lincoln was the only major firm active in the county during this period. In 1901 the newly formed American Bridge Company conglomerate received a contract to erect all the county's bridges that year, and between 1902 and 1906 the annual bridge contracts went to the Canton Bridge Company. From 1907 through the 1920s, Dakota County contracted with E.S. Beaty on an annual unit-price basis for its bridges. The Johnson/Ronnfeldt Bridge is a typical example of a common bridge type in Dakota County and Nebraska.

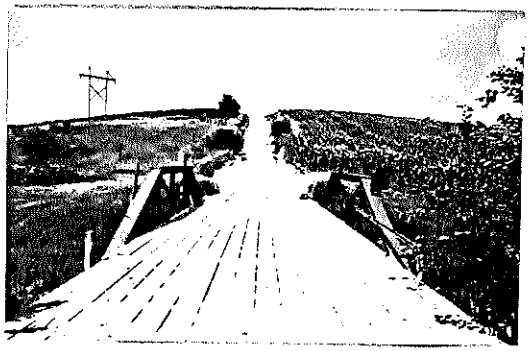
NAME(S) OF STRUCTURE

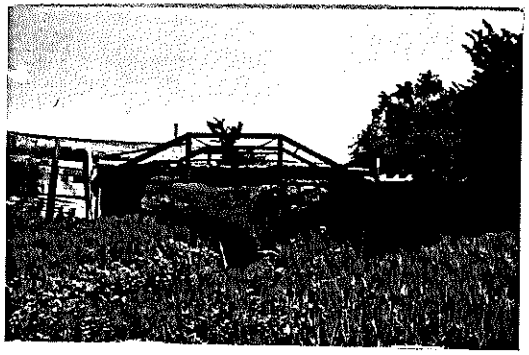
Johnson/Ronnfeldt Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C002203010; Dakota County Commissioners' Record, Books E and F, covering the period 1898 to 1920; field inspection by Fred Quivik, 22 July 1989.

INVENTORIED BY	AFFILIATION	DATE
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Virginia Hale Bridge
NDOR: C002203105

DAKO05

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
county road over Omaha Creek; NE1/4 S7, T27N, R9E
1.8 miles east of Homer; Dakota County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 28)

CONDITION
good

OWNER
Dakota County

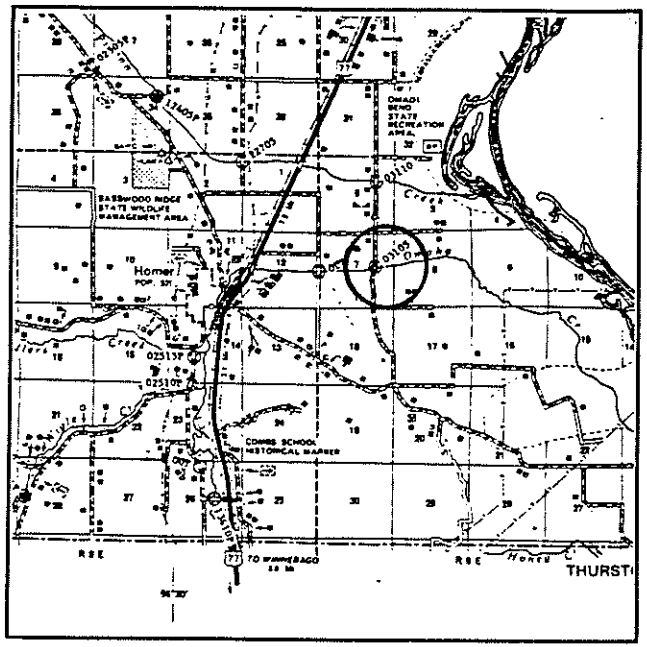
span number:	1	superstructure:	steel, 3-panel, pin- / rigid-connected Pratt pony truss
span length:	60.0'	substructure:	steel H-beam pile bent piers and abutments with timber back- and wingwalls
total length:	100.0'	floor/decking:	plank on plank over I-beam stringers
roadway wdt.:	15.6'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: punched eyebars; vertical: 2 pair angles with batten plates; diagonal: eyerods; floor beam: I-beams; lateral bracing: rod with threaded ends; guardrail: 2 channels

In their discussion of bridge work, Dakota County Commissioners' minutes seldom refer to the construction of specific bridges, making it difficult to identify individual bridges definitively. Such is the case with this small-scale structure which spans Omaha Creek just under two miles east of Hale. A three-panel, pin- / rigid-connected Pratt pony truss with flanking steel stringer approach spans, the bridge is supported by steel H-pile bent piers and abutments. With combined pinned and riveted connections, the truss displays the earmarks of a standard bridge design issued by the Nebraska Bureau of Roads and Bridges during the 1910s. From 1907 through the 1920s, Dakota County's annual bridge building contacts were held by E.S. (Eugene) Beaty, a locally prominent contractor from Blair, Nebraska. This bridge was almost assuredly built by Beaty around 1915, but other details of its construction history have not been uncovered. Known locally as the Virginia Hale Bridge, it appears to have carried vehicular traffic over the years without major alteration.

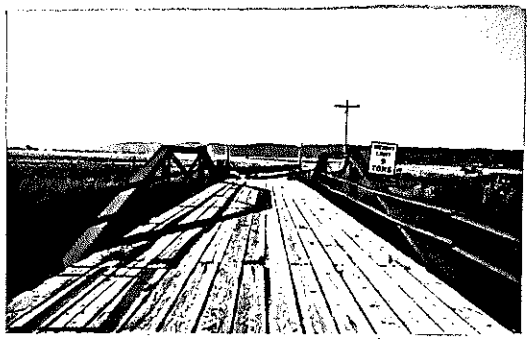
The Virginia Hale Bridge typifies small-scale truss construction in Nebraska in the 1910s. Using a state-standard pony truss design, it is a well-preserved, though technologically unremarkable, example of one of the state's most common vehicular truss types.

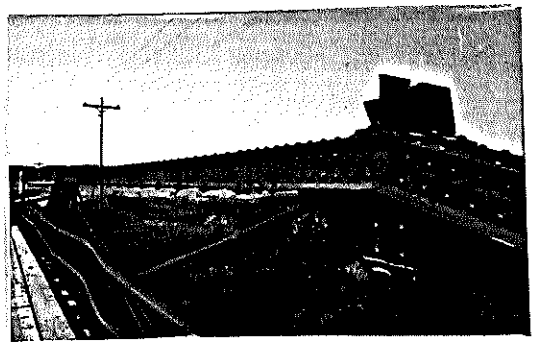
NAME(S) OF STRUCTURE
Virginia Hale Bridge

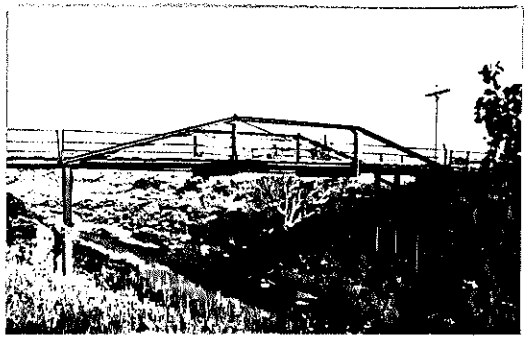
PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP







SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C002203105; Dakota County Commissioners' Record, Books E and F, covering the period 1898 to 1920; field inspection by Fred Quivik, 22 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Wigle Creek Bridge
NDOR: C002203405P

DAKO06

DATE(S) OF CONSTRUCTION
ca.1920

LOCATION
county road over Wigle Creek; W1/2 S28, T27N, R8E
3.5 miles southwest of Homer; Dakota County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 23)

CONDITION
good

OWNER
Dakota County

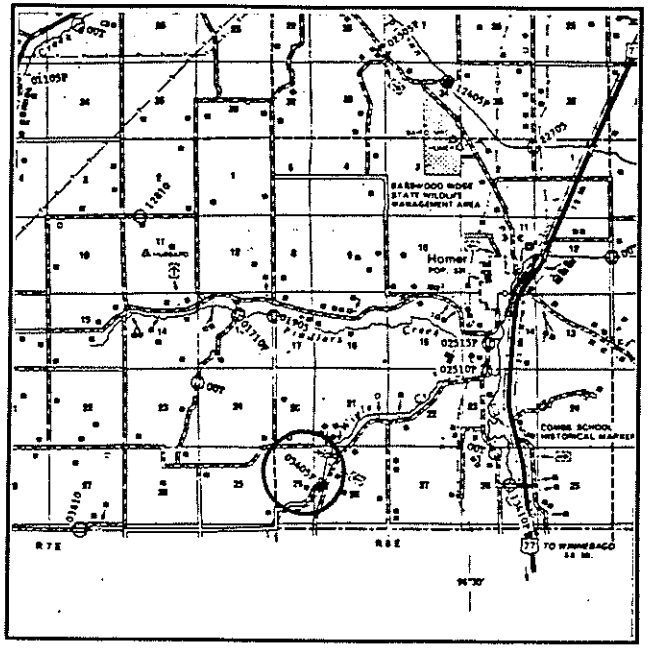
span number:	1	superstructure:	steel, 4-panel, pin / rigid-connected Pratt pony truss
span length:	66.0'	substructure:	steel H-beam pile bent abutments with timber back- and wingwalls
total length:	68.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	16.0'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 punched eyebars; vertical: 2 pair angles with batten plates; diagonal: 2 punched eyebars; counter: eyerod with turnbuckle; floor beam: I-beam, field bolted to vertical below lower chord; lateral bracing: rod with threaded ends; guardrail: 2 channels

Each year from 1907 to the early 1920s, Dakota County awarded its annual bridge construction contract to Eugene S. Beaty, a regionally prominent bridge builder from Blair, Nebraska. This truss over an intermittent stream west of Jackson was among the numerous small-scale trusses Beaty built in the county during this period. Built ca.1920 from a standard design developed by the state engineer's office, the structure consists of a three-panel, Pratt pony truss with pinned and bolted connections, supported by rolled H-pile abutments with timber back and wingwalls. The Wigle Creek Bridge appears to have carried vehicular traffic over the years without major alteration.

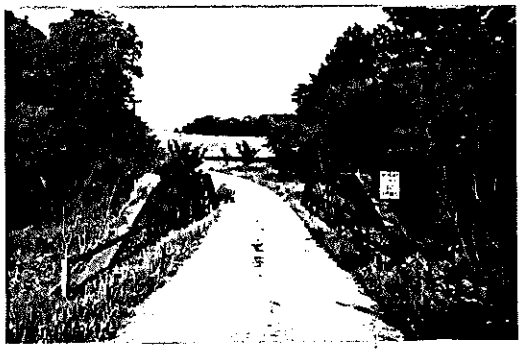
Built at a relatively late date and with its construction history largely undocumented, the Wigle Creek Bridge is one of the less distinguished among Nebraska's Pratt pony trusses.

NAME(S) OF STRUCTURE
Wigle Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C002203405P; Dakota County Commissioners' Record, Books E and F, covering the period 1898 to 1920; field inspection by Fred Quivik, 22 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Elk Creek Bridge
NDOR: C002210810P

DAKO07

DATE(S) OF CONSTRUCTION
ca.1925

LOCATION
county road over Elk Creek; NE1/4 S21, T29N, R8E
west side of South Sioux City; Dakota County, Nebraska

USE (ORIGINAL / CURRENT)
highway bridge / highway bridge

RATING NRHP non-eligible (score: 33)

CONDITION
good

OWNER
Dakota County

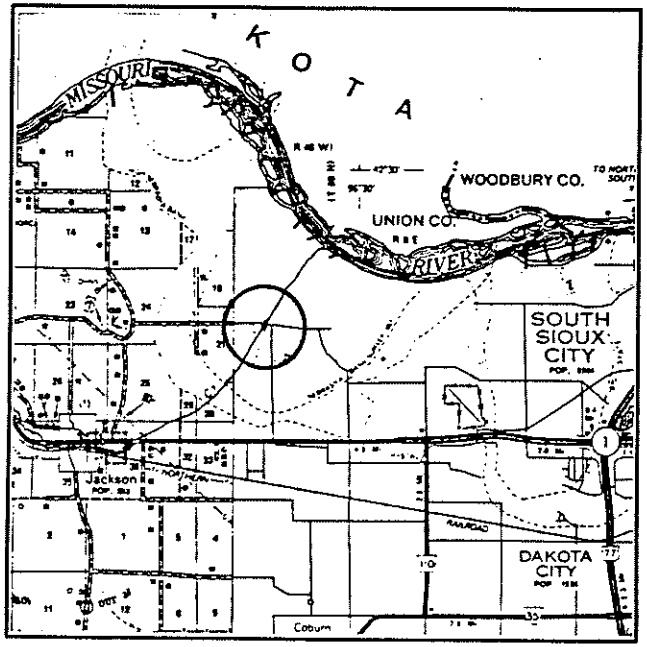
span number:	1	superstructure:	steel, 5-panel, rigid-connected Pratt pony truss
span length:	100.0'	substructure:	steel I-beam pile bent piers and abutments
total length:	152.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.2'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 channels with batten plates; vertical: 2 pair angles with batten plates; diagonal: 2 angles with batten plates; floor beam: I-beam, field bolted to vertical below lower chord; lateral bracing: rod with threaded ends; guardrail: 2 channels

Located west of South Sioux City, the Elk Creek Bridge consists of a single 100-foot rigid-connected Pratt pony truss with steel stringer approach spans, supported by steel pile bent piers and abutments. Comprised of steel components rolled by the Illinois Steel Company, the truss's precise date of erection and builder are unknown. Based on its design attributes, however, the bridge appears to have been built in the mid-1920s - a period in which E.S. Beaty of Blair NE held the county's annual bridge construction contracts - from standard plans delineated by the Nebraska Bureau of Roads and Bridges.

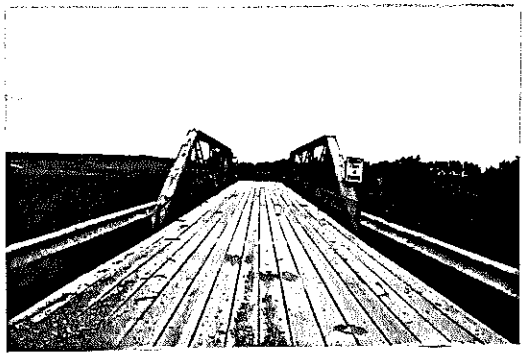
The Elk Creek Bridge is one of dozens of this relatively common structural type found in the state. Virtually all of these can be attributed to the standardized designs developed by the state highway department. Although the 100-foot span length is the longest developed by the highway department for this truss configuration (through trusses were used for longer spans), this fact is only marginally noteworthy. More significant, multi-span examples of this truss type remain in use, unaltered, over the Platte River in western Nebraska. The Elk Creek Bridge suffers in comparison with these potentially eligible structures. As a historically undocumented, single-span example of a common structural type, carrying a county road over a minor watercourse, the Elk Creek Bridge possesses marginal historical and technological significance.

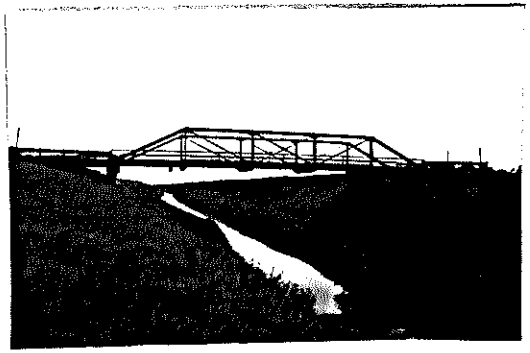
NAME(S) OF STRUCTURE
Elk Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C002210810P; field inspection by Fred Quivik, 22 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Elk Creek Bridge
NDOR: C002211705P

DAKO08

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over Elk Creek; S36, T29N, R7E
east edge of Jackson; Dakota County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 28)

CONDITION
good

OWNER
Dakota County

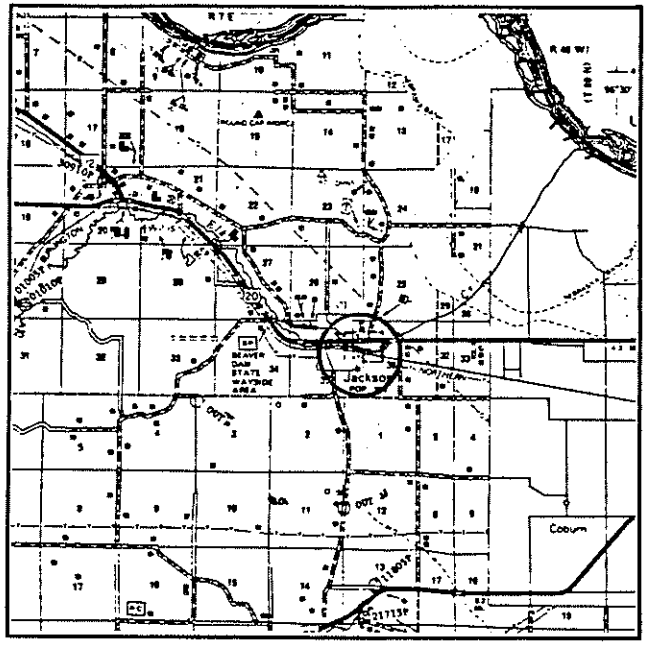
span number:	1	superstructure:	steel, pin-connected Pratt pony truss with outriders
span length:	60.0'	substructure:	steel H-beam pile bent pier and abutments with timber back- and wingwalls
total length:	94.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.6'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 punched eyebars; vertical: 2 pair angles with batten plates; diagonal: eyerods; floor beam: I-beam, field bolted to vertical above lower chord; lateral bracing: rod with threaded ends; guardrail: 2 channels

In their discussion of bridge work, Dakota County Commissioners' minutes seldom refer to the construction of specific bridges, making it difficult to identify individual bridges. Such is the case with this small-scale structure which spans Elk Creek just east of Jackson in north-central Dakota County. A three-panel, pin-connected Pratt pony truss with outriders, the bridge is characteristic of truss bridge construction from the period in the early 1910s. From 1907 through the 1920s, the Dakota County annual bridge contracts were held by E.S. (Eugene) Beaty of Blair, Nebraska. The Elk Creek Bridge was probably built by Beaty during this period, but other details of its construction history remain obscure. The structure appears to have carried vehicular traffic over the years without major alteration.

In the late 1890s, most of the bridge construction in Dakota was undertaken by local contractors under contract with the county commissioners. J.R. Sheeley of Lincoln was the only major firm active in the county during this perid. In 1901 the newly formed American Bridge Company conglomerate received a contract to erect all the county's bridges that year, and between 1902 and 1906 the annual bridge contracts went to the Canton Bridge Company. From 1907 through the 1920s, Dakota County contracted with E.S. Beaty on an annual unit-price basis for its bridges. The Johnson/Ronnfeldt Bridge is a typical example of a common bridge type in Dakota County and Nebraska.

NAME(S) OF STRUCTURE
Elk Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C002211705P; Dakota County Commissioners' Record, Books E and F, covering the period 1898 to 1920; field inspection by Fred Quivik, 22 July 1989.

INVENTORIED BY	AFFILIATION	DATE
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Conway Bridge
NDOR: C002212405P

DAKO09

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over Pigeon Creek; NE1/4 S34, T28N, R8E
2.5 miles north-northwest of Homer; Dakota County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 28)

CONDITION
good

OWNER
Dakota County

span number: 1
span length: 60.0'
total length: 104.0'
roadway wdt.: 15.5'

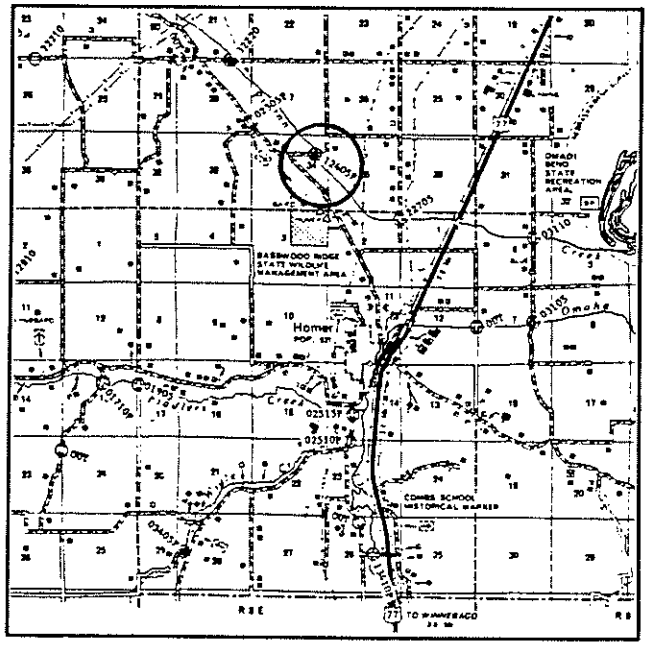
superstructure: steel, 3-panel, pin-connected Pratt pony truss with outriders
substructure: steel H-beam pile bent piers and abutments with timber back- and wingwalls
floor/decking: timber deck over I-beam stringers
other features: upper chord: 2 channels with cover plate and lacing; lower chord: 2 punched eyebars; vertical: 2 pair angles with batten plates; diagonal: eyerods; floor beam: I-beam, field bolted to vertical above lower chord; lateral bracing: rod with threaded ends; guardrail: 2 channels

In their discussion of bridge work, Dakota County Commissioners' minutes seldom refer to the construction of specific bridges, making it infeasible to conclusively identify individual bridges. Such is the case with this small-scale structure which spans Pigeon Creek 2-1/2 miles northwest of Homer. A three-panel, pin-connected Pratt pony truss with outriders, approached on both sides by steel stringer spans, the bridge is supported by steel H-pile bent piers and abutments. The truss was fabricated from a standard design by the Nebraska State Engineer and probably built by contractor E.S. (Eugene) Beaty of Blair NE, who held Dakota County's annual bridge construction contracts from 1907 through the 1920s. Known locally as the Conway Bridge, structure appears to have carried vehicular traffic since its erection without major alteration.

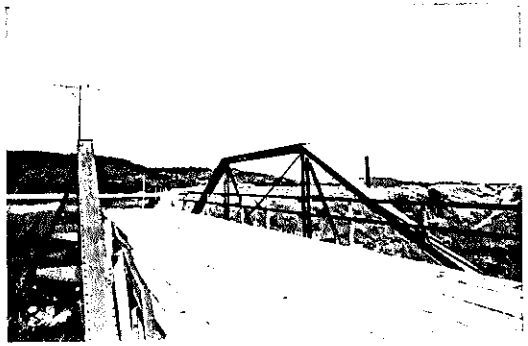
The Conway Bridge is a typical example of an exceedingly common vehicular truss type.

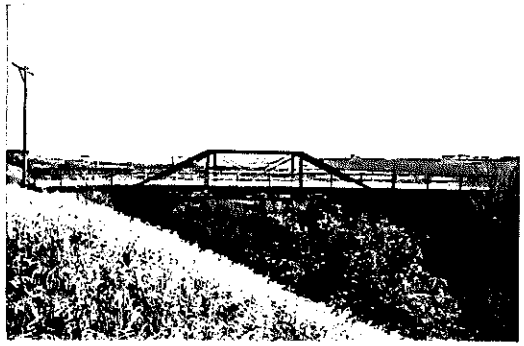
NAME(S) OF STRUCTURE
Conway Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C002212405P; Dakota County Commissioners' Record, Books E and F, covering the period 1898 to 1920; field inspection by Fred Quivik, 22 July 1989.

INVENTORIED BY	AFFILIATION	DATE
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Whitney Bridge [White River Bridge] DAWE01
NDOR: SS23A00172

DATE(S) OF CONSTRUCTION
1937

LOCATION
State Spur 23A over White River; S1, T32N, R51W
south edge of Whitney; Dawes County, Nebraska

USE (ORIGINAL / CURRENT)
highway bridge / highway bridge

RATING NRHP non-eligible (score: 30)

CONDITION
excellent

OWNER
Nebraska Department of Roads

span number:	3	superstructure:	steel cantilevered stringer, skewed
span length:	80.0'	substructure:	concrete abutments and spill-through piers
total length:	201.0'	floor/decking:	concrete deck over steel stringers
roadway wdt.:	24.0'	other features:	steel guardrail; bridge plate: **CAPACITY 20 TONS 265.F.1.1937**

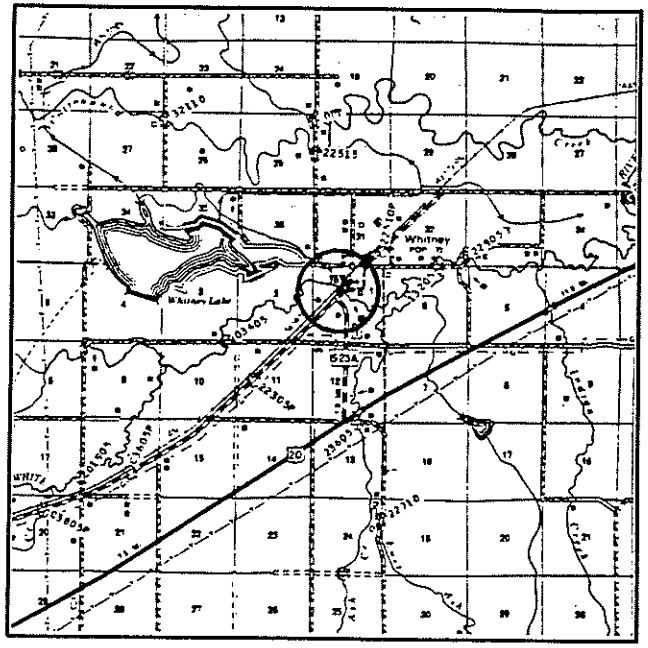
Early in 1937 the Bureau of Roads and Bridges of Nebraska's Department of Roads and Irrigation completed the construction drawings for a major bridge to replace the existing 100-foot truss over the White River at the southern edge of Whitney. Carrying a section of the Chadron-Crawford Highway (now designated State Spur 23A), the structure consisted of three slightly skewed steel stringer spans, supported by concrete piers and abutments. Like many of the state's long-span beam bridges of the period, the Whitney Bridge featured a suspended center span, held by the cantilevered arms of the two flanking spans. The center span in this case extended 80 feet. The Whitney Bridge was massive, consuming some 173,445 pounds of superstructural steel, 36,950 pounds of reinforcing steel and 1768 cubic yards of concrete in the substructure, and costing $41,085.54, including approach grading and surfacing. The bureau let the project for competitive bids under Project No. 265-F, and in May 1937 it awarded a construction contract for the Whitney Bridge to the Platte Valley Construction Company of Grand Island, Nebraska. Since its completion later that year, the Whitney Bridge has carried vehicular traffic without major alteration.

The engineers of the Nebraska Bureau of Roads and Bridges experimented extensively in the 1930s with long-span, cantilevered beam bridges, ultimately extending their length to some 134 feet. The Whitney Bridge is a representative example of the bureau's cantilevered I-beam structures of the period.

NAME(S) OF STRUCTURE

Whitney Bridge [White River Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number SS23A00172; "2-60'0" & 1-80'0" Deck Steel Girder Spans," original construction drawings by Nebraska Bureau of Roads and Bridges, 3 February 1937, located at Nebraska Department of Roads, Lincoln, Nebraska; Nebraska Department of Roads and Irrigation, **Twenty-Second Biennial Report of the Department of Roads and Irrigation**, 1937-38, page 147; field inspection by Clayton Fraser, 23 April 1990.

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Lime Creek Bridge
NDOR: C002600405

DIXO01

DATE(S) OF CONSTRUCTION
ca.1920

LOCATION
township road over Lime Creek; S5/32, T31/32N, R4E
0.5 mile north of Maskell; Dixon County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 32)

CONDITION
fair

OWNER
Dixon County

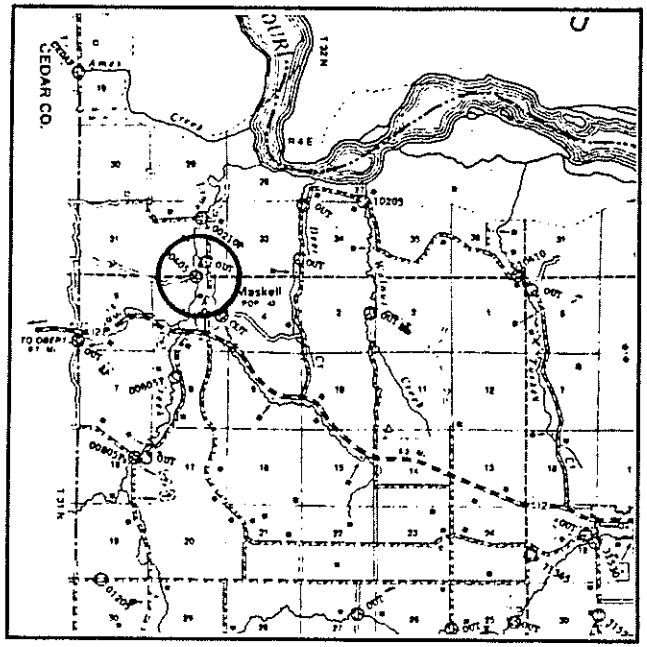
span number:	1	superstructure:	transverse joist girder with steel stringer approach spans
span length:	60.0'	substructure:	I-beam pile bent piers and abutments with timber back- and wingwalls
total length:	171.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.0'	other features:	secondary transverse stringers rest on an angle and are riveted to the web of deeper outside main stringers; struts: I-beam at bottom of webs; lateral bracing: angles; guardrail: lattice (girder), 2 angles (approach spans)

Dixon County was ordering "steel girder" bridges as early as 1906, but it is unclear if these were simply stringer spans. In 1915, the county voted for a bridge to be built "near center North line Sec. 5-31-4 one half mile North town of Maskell." This bridge, however, was apparently a 32-foot span with a roadway 16 feet wide. The record is rather cryptic, twice ordering that the builder was to "use old joist." The current bridge may have replaced this structure in 1918, when "a motion was... made and seconded that a 200 foot steel bridge be ordered built North of Maskell, in Hooker Township." The motion carried. A later reference, however, places this bridge in the southern part of the southeastern quarter of Section 30, North Hooker Township, rather than Section 32. Since there does not appear to be any obstacle that would justify location of a long bridge in Section 30, this may be a typographical error. On the other hand, the transverse joist girder design was included among standard state plans by the late 1910s and had become very popular by the early 1920s. Regardless of inconclusive documentation, therefore, a ca.1920 date thus seems reasonable. Robert Zale Drake, owner of the Standard Bridge Company of Omaha, Nebraska, is credited with developing the transverse joist girder bridge as well as the multiple punch for its manufacture. The Standard Bridge Company received Dixon County's annual bridge contract from the early 1900s into the 1910s, and perhaps beyond. Since counties were required to use state standard plans after 1913, this bridge was probably based on state designs.

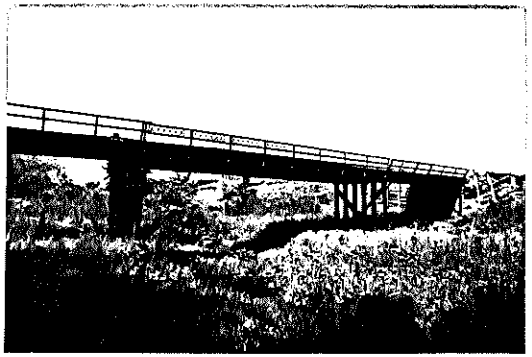
The Lime Creek Bridge is representative of early attempts by bridge builders to extend the length of I-beam spans for use in locations traditionally requiring truss bridges. Its manufacture could be easily standardized, and its construction was quick and required no false work. The transverse joist girder bridge is reported to have been developed in Nebraska, and became very popular in the state. An engineer writing in 1927 remarked that over 1,000 bridges of this style had been built in Nebraska since 1917.

NAME(S) OF STRUCTURE
Lime Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C002600405; Dixon County Board of Supervisors' Records, 1897-1920, specifically 28 March 1906, 12 January 1915, and 14 August 1918, located at the Dixon County Courthouse, Ponca, Nebraska; Ted Johnson, "A Discussion of the Transverse Joist Girder Bridge," **Nebraska Blue Print**, March 1927, pp. 12-13; field inspection by Fred Quivik, 22 July 1989.

INVENTORIED BY	**AFFILIATION**	**DATE**
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Logan Creek Bridge
NDOR: C002600705

DIXO02

DATE(S) OF CONSTRUCTION
1909

LOCATION
township road over Logan Creek; S27/28, T28N, R4E
1.5 miles southeast of Concord; Dixon County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 36)

CONDITION
good

OWNER
Dixon County

span number:	1	superstructure:	steel, 5-panel, pin-connected Pratt pony truss with steel stringer approach span
span length:	70.0'	substructure:	I-beam pile bents and abutments with timber/sheet piling back- and wingwalls
total length:	89.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.6'	other features:	upper chord: 2 channels with cover plate and batten plates; lower chord: punched eyebars; vertical: 2 pair angles with batten plates; diagonal: looped eyebars; counters: rods; floor beam: I-beam; lateral bracing: rods; guardrail: lattice

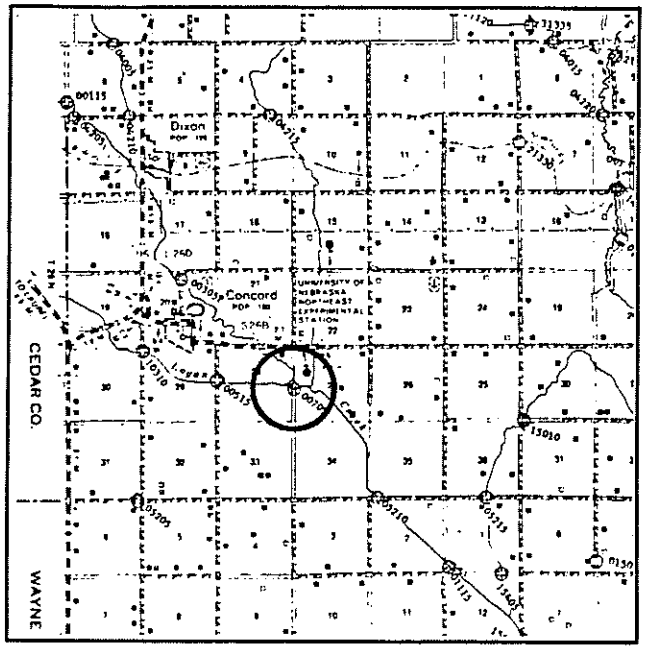
This bridge carries a north-south unpaved road over Logan Creek. On January 14, 1909, the Dixon County Board of Supervisors awarded their annual bridge construction contract to Standard Bridge Company, Omaha, as they had for many years previously. That May the county ordered several bridges, including a 70-foot span on 30-foot piling in the center of Section 27, Township 28, Range 4. The county's bridge book records that a 70-foot steel bridge was indeed built in 1909 by Standard Bridge at this location. Total cost for fabrication and erection: $1930.00.

This bridge is typical of the many small structures built by the counties during the first two decades of this century in response to the public's demand for adequate transportation networks. Unlike many similar structures, the builder and the construction date for this bridge are documented.

NAME(S) OF STRUCTURE

Logan Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C002600705; Dixon County Bridge Record and Dixon County Board of Supervisors' Records, 1897-1920, specifically 14 January and 4 May 1909, located at the Dixon County Courthouse, Ponca, Nebraska; field inspection by Fred Quivik, 19 July 1989.

INVENTORIED BY	AFFILIATION	DATE
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Logan Creek Bridge
NDOR: C002601115

DIXO03

DATE(S) OF CONSTRUCTION
ca.1920

LOCATION
Collector Route 11C over Logan Creek; SW1/4 S1, T27N, R4E
5.0 miles northwest of Wakefield; Dixon County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 20)

CONDITION
good

OWNER
Dixon County

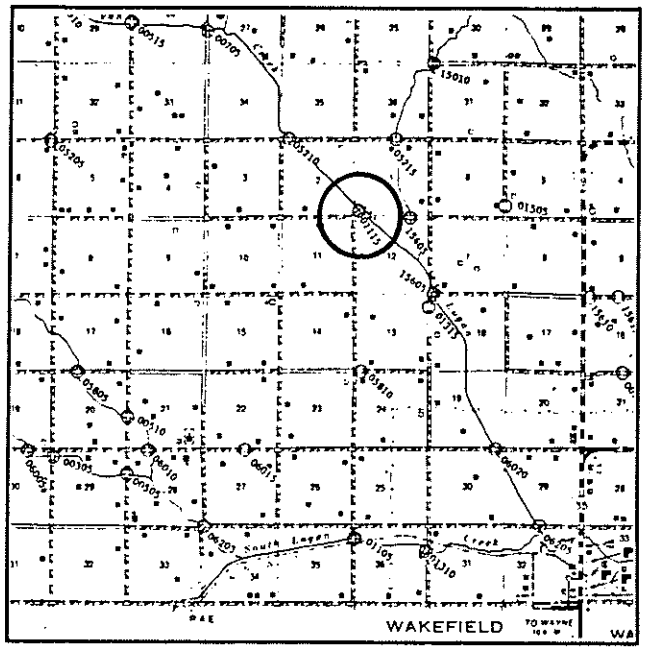
span number:	1	superstructure:	steel transverse joist through girder with steel stringer approach spans
span length:	54.0'	substructure:	I-beam pile bent piers and abutments with timber backwalls
total length:	110.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	16.0'	other features:	joists rest on bottom flange of girders; guardrail: lattice riveted to top of girders

The transverse joist girder design was included among standard state plans by the late 1910s, and had become very popular by the early 1920s. Although Dixon County records do not refer specifically to this bridge, a circa 1920 date seems reasonable. Robert Zale Drake, owner of the Standard Bridge Company of Omaha, Nebraska, is credited with developing the transverse joist girder bridge as well as the multiple punch for its manufacture. The Standard Bridge Company received Dixon County's annual bridge contract from the early 1900s into the 1910s, and perhaps beyond. Since counties were required to use state standard plans after 1913, this bridge was probably based on state designs.

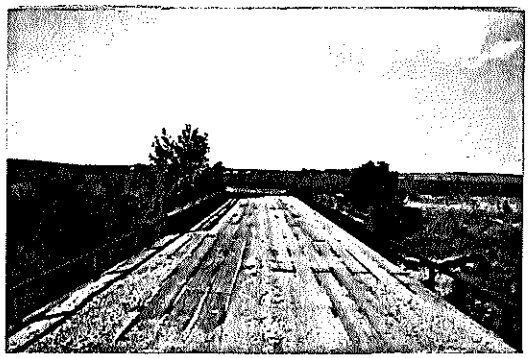
This bridge is representative of early attempts by bridge builders to extend the length of I-beam spans for use in locations traditionally requiring truss bridges. Its manufacture could be easily standardized, and its construction was quick and required no false work. The transverse joist girder bridge is reported to have been developed in Nebraska, and became very popular in the state. An engineer writing in 1927 remarked that over 1,000 bridges of this style had been built in Nebraska since 1917.

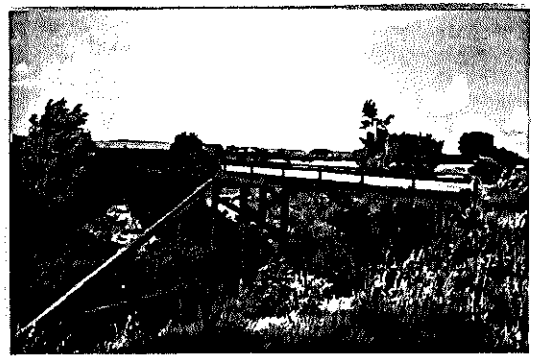
NAME(S) OF STRUCTURE
Logan Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C002601115; Dixon County Board of Supervisors' Records, 1897-1920, located at the Dixon County Courthouse, Ponca, Nebraska; Ted Johnson, "A Discussion of the Transverse Joist Girder Bridge," **Nebraska Blue Print**, March 1927, pp. 12-13; field inspection by Fred Quivik, 22 July 1989.

INVENTORIED BY	**AFFILIATION**	**DATE**
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Daily Branch Bridge
NDOR: C002601305P

DIXO04

DATE(S) OF CONSTRUCTION
1911-12

LOCATION
township road over Daily Branch; N1/2 S6, T29N, R5E
3.5 miles northwest of Martinsburg; Dixon County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 33)

CONDITION
good

OWNER
Dixon County

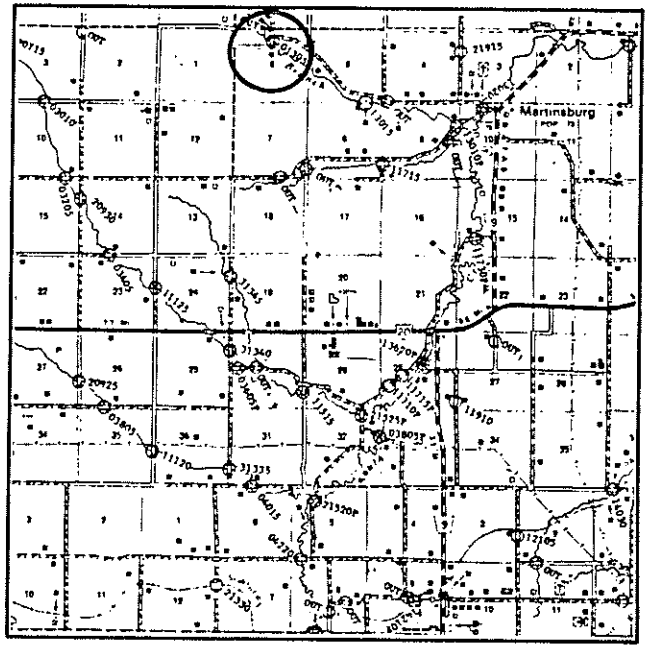
span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt half-hip pony truss
span length:	50.0'	substructure:	I-beam piles with timber back- and wingwalls
total length:	51.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.4'	other features:	upper chord: 2 channels with cover plate and batten plates; lower chord: looped eyebars; vertical: 2 pair angles with lacing; diagonal: looped eyebars; counter: rods; floor beam: I-beam; lateral bracing: rods; guardrail: lattice

The Dixon County bridge book records that bridge number 839, a 50-foot span structure with a 16-foot roadway, was built in 1911 near the center of the north line of Section 6, Township 29, Range 5. According to the record, construction cost was about $1,530. Board of Supervisors' minutes, however, claim that bridge number 839 was ordered built in October 1912. The minutes describe the location in Section 6 as "80 rods N.W. of old Krause house," and noted that the 50-foot, 4 panel structure would rest on "A. Piles." The Standard Bridge Company of Omaha had been awarded the county's annual bridge erection contract in both 1911 and 1912, as was true nearly every year for the first two decades of the 20th century.

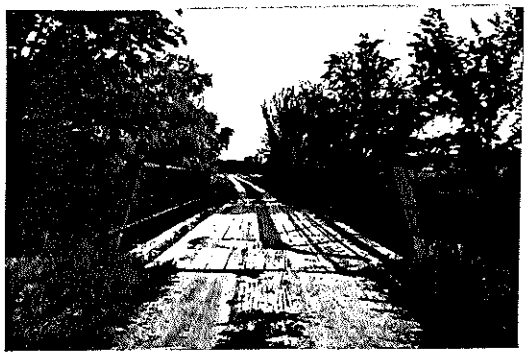
Half-hip pony truss bridges were popular in the late 19th and early 20th centuries in Nebraska. Since there were no verticals at the hips, the structures required less materials and were, therefore, less expensive. Half-hip trusses were not included in standard plans developed by the state engineer; use of these plans was required after 1913, so this bridge dates from the last years that this design was built. A number of half-hip ponies survive in Nebraska, although there is a rapid rate of attrition. Of the five in Dixon County selected for inclusion in the Nebraska Historic Bridge Inventory, only two (the other: **DIXO08**) remained at the time the survey was conducted.

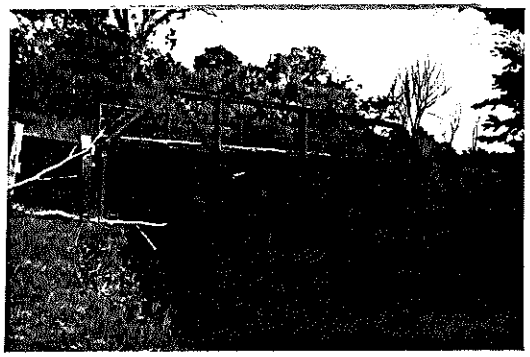
NAME(S) OF STRUCTURE
Daily Branch Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C002601305P; Dixon County Bridge Book, and Board of Supervisors' Records, 1897-1920, located at the Dixon County Courthouse, Ponca, Nebraska; field inspection by Fred Quivik, 22 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Daily Branch Bridge
NDOR: C002602410

DIXO05

DATE(S) OF CONSTRUCTION
1914

LOCATION
township road over Daily Branch; S23/26, T30N, R4E
6.0 miles northwest of Martinsburg; Dixon County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 36)

CONDITION
good

OWNER
Dixon County

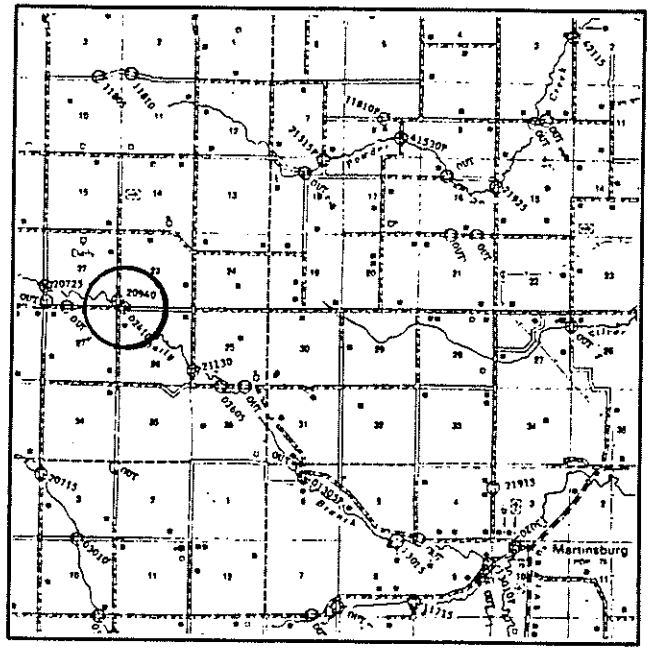
span number:	1	superstructure:	steel, 5-panel, pin-connected Pratt pony truss
span length:	70.0'	substructure:	I-beam piles with timber back- and wingwalls
total length:	72.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.8'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: punched eyebars; vertical: 2 pair angles with batten plates; diagonal: punched eyebars; counters; looped eyebars; struts: outriggers; floor beam: I-beam; lateral bracing: rods; guardrail: 2 channels riveted to outrigger battens

On November 12, 1913, the bridge committee of the Dixon County Board of Supervisors recommended construction of a number of bridges "under the 1913 bridge contract," including a "70 Span on A. Caps and piles" in the northwest quarter of Section 26, Township 30, Range 4. Since this recommendation was made at the end of the 1913 construction season, the bridges were presumably built the following year. Standard Bridge Company received the county's annual bridge erection contract in both 1913 and 1914, as it did for almost all years in the first two decades of the 20th century. Since the state passed a law in 1913 requiring that counties use standard bridge plans developed by the state engineer, the bridge design was probably based on these plans.

This is a typical pony truss, probably designed from state standard plans and dating from the mid-1910s. It was built by Standard Bridge Company, a prominent and prolific early 20th century Nebraska bridge-building company.

NAME(S) OF STRUCTURE
Daily Branch Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C002602410; Dixon County Board of Supervisors' Records, 1897-1920, located at the Dixon County Courthouse, Ponca, Nebraska; field inspection by Fred Quivik, 22 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Aowa Creek Bridge
NDOR: C002603105

DIXO06

DATE(S) OF CONSTRUCTION
1918

LOCATION
township road over Aowa Creek; S21/22, T30N, R6E
Southwest edge of Ponca; Dixon County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 36)

CONDITION
good

OWNER
Dixon County

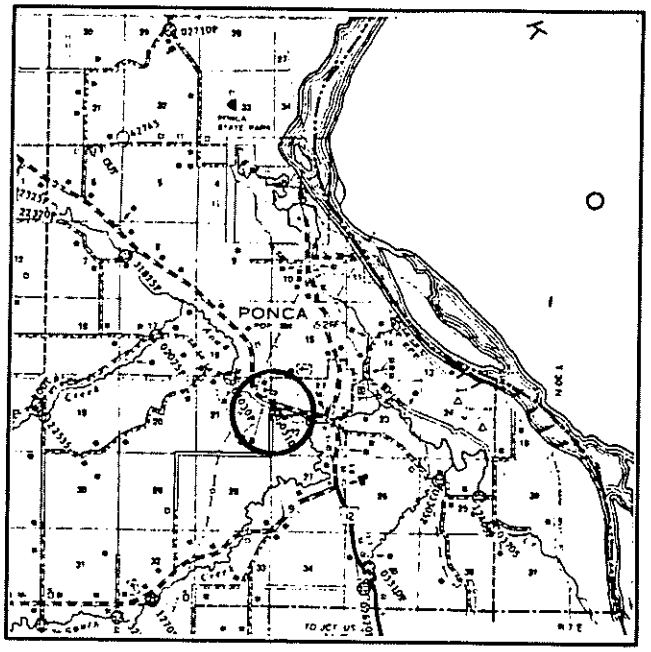
span number:	1	superstructure:	steel, 4-panel, pin- / rigid-connected Pratt pony truss
span length:	60.0'	substructure:	I-beam pile bents and abutments with timber back- and wingwalls
total length:	93.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.6'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: looped eyebars; vertical: 2 pair angles with battens; diagonal: looped eyebars; counters: rods; floor beam: I-beam; lateral bracing: rods; guardrail: 2 angles, lattice at north approach

On April 14, 1918, the Dixon County Board of Supervisors voted to build a number of bridges, including this 60-foot span in the southwest part of Ponca Township. Built using steel components rolled by Jones and Laughlin, the truss was fabricated from a standard design by the Nebraska State Engineer. The Standard Bridge Company received the county's annual bridge construction contract for 1918, as it did nearly every year for the first two decades of the 20th century. It was thus probably responsible for the erection of this bridge.

The Aowa Creek Bridge is a typical pony truss, designed from state standard plans and dating from the 1910s. It was built by the Standard Bridge Company, a prominent and prolific Nebraska bridge builder.

NAME(S) OF STRUCTURE
Aowa Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C002603105; Dixon County Board of Supervisors' Records, 1897-1920, see specifically 14 April 1918, located at the Dixon County Courthouse, Ponca, Nebraska; field inspection by Fred Quivik, July 1989.

INVENTORIED BY	AFFILIATION	DATE
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
South Creek Bridge
NDOR: C002603805P

DIXO07

DATE(S) OF CONSTRUCTION
ca.1920

LOCATION
township road over South Creek; S32/33, T29N, R5E
2.2 miles north of Allen; Dixon County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 8)

CONDITION
good

OWNER
Dixon County

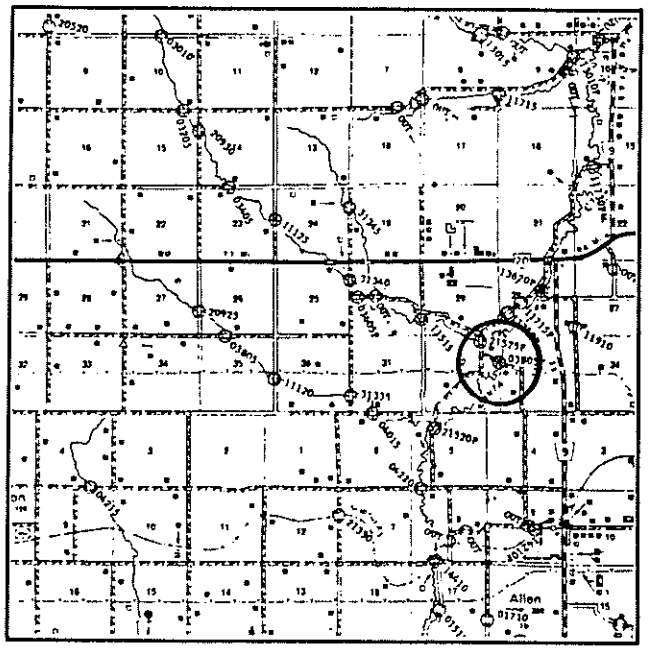
span number:	1	superstructure:	steel deck girder
span length:	60.0'	substructure:	tubular piers; I-beam pile abutments with timber back- and wingwalls
total length:	136.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	16.1'	other features:	girder: 2 angles at top and bottom of sheet steel; stringers: I-beam on top flange; floor beam: I-beam riveted to web; guardrail: lattice

Dixon County records do not refer specifically to this bridge. Since the county records are quite detailed during the years examined (1900-1920), it seems probable that the bridge dates from a later period, or may have been moved to this site. The girders are not centered on the tubular piers, perhaps further evidence of a move or a remnant of an earlier structure on the site. Dixon County was ordering "steel girder" bridges as early as 1906. This type of structure is utilitarian, and varied little in appearance during the first several decades of the 20th century.

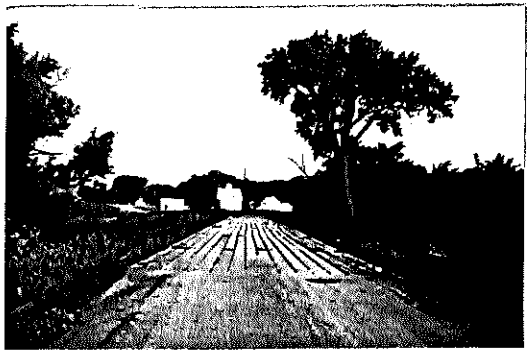
Deck girder bridges were among the alternatives developed in the early 20th century to bridge locations traditionally requiring pony trusses. The South Creek Bridge is a typical deck girder configuration.

NAME(S) OF STRUCTURE
South Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C002603805P; Dixon County Board of Supervisors' Records, 1897-1920, specifically 28 March 1906, located at the Dixon County Courthouse, Ponca, Nebraska; field inspection by Fred Quivik, 20 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C002611125

DIXO08

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
township road over unnamed stream; S23/24, T29N, R4E
5.0 miles southwest of Martinsburg; Dixon County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 29)

CONDITION
good

OWNER
Dixon County

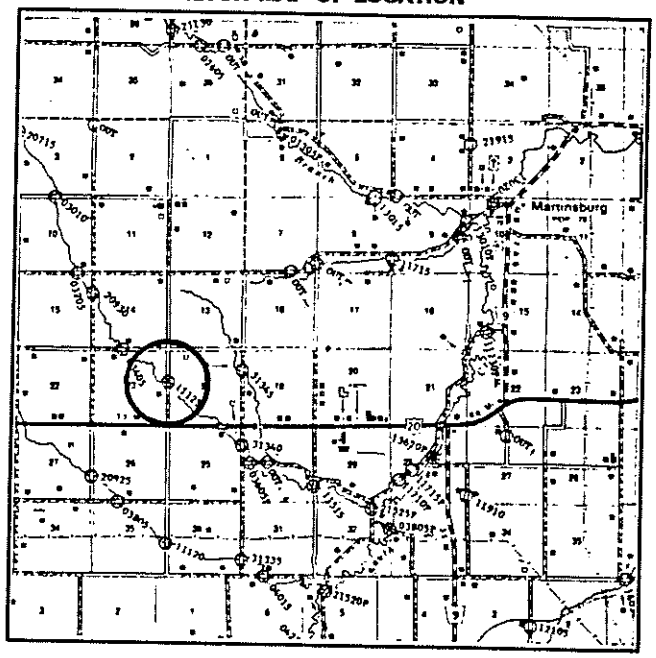
span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt half-hip pony truss
span length:	60.0'	substructure:	I-beam pile abutments with timber back- and wingwalls
total length:	61.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	15.8'	other features:	upper chord: 2 channels with cover plate and batten plates; lower chord: looped eyebars (outer), punched eyebars (middle); vertical: 2 pair angles with lacing; diagonal: looped eyebars; counters: looped eyebars; floor beam: I-beams; lateral bracing: rods; guardrail: lattice

Dixon County records do not refer specifically to this bridge. Since the county's bridge records from the first decades of the 20th century are quite detailed, it seems likely that this structure was moved at some point. Half-hip trusses were not included in state standard plans, so this bridge presumably dates prior to 1913 when use of the state plans became mandatory. A number of 60-foot steel bridges were built in Dixon county before 1913, many by Standard Bridge Company of Omaha which received the county's annual bridge contract for at least two decades beginning in 1900. Since bridge companies usually provided their own plans, the bridge was probably designed by Standard as well.

Half-hip pony truss bridges were popular in the late 19th and early 20th centuries. Since there were no verticals at the hips, the structures required less materials and were, therefore, less expensive. Half-hip trusses were not included in standard plans developed by the state engineer; use of these plans was required after 1913, so this bridge dates from the last years that this design was built. A number of half-hip ponies survive in Nebraska, although there is a rapid rate of attrition. Of the five in Dixon County selected for inclusion in the Nebraska Historic Bridge Inventory, only two (the other: DIXO04) remained standing at the time the survey was conducted.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C002611125; Dixon County Board of Supervisors' Records, 1897-1920, located at the Dixon County Courthouse, Ponca, Nebraska; field inspection by Fred Quivik, 23 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Schram Bridge [South Creek Bridge] DIXO09
NDOR: C002613620P

DATE(S) OF CONSTRUCTION
1907

LOCATION
township road over South Creek; S28, T29N, R5E
3.0 miles north of Allen; Dixon County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 38)

CONDITION
good

OWNER
Dixon County

span number:	1	superstructure:	steel, 5-panel, pin-connected Pratt pony truss
span length:	70.0'	substructure:	tubular piers; steel stringer approach span (north)
total length:	86.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.5'	other features:	upper chord: 2 channels with cover plate and batten plates; lower chord: looped eyebars, punched eyebars (center); vertical: 2 pair angles with batten plates; diagonal: looped eyebars; counter: eyerod with turnbuckle; floor beam: I-beam; lateral bracing: round rod with threaded ends; guardrail: lattice (not original)

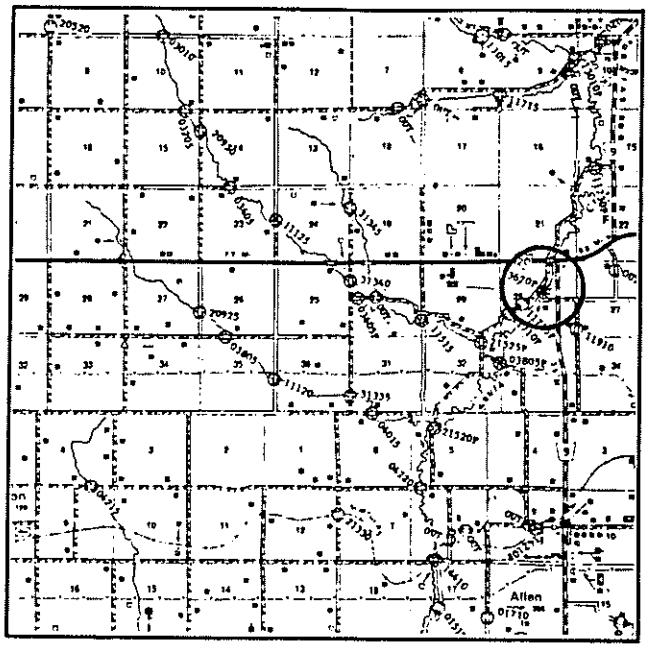
On February 20, 1907, the bridge committee of the Dixon County Board of Supervisors delivered a report "on the number, dimension, location and kind of bridge made necessary to construct or repair by reason of the recent floods in Dixon County." Among the recommendations for new construction was the "Schram Bridge," located in Section 28, Township 29N, Range 5 East. The structure was to have a 70-foot span and rest on tubular piers, with a 40-foot approach. Standard Bridge Company of Omaha received the county's 1907 annual bridge erection contract, as it apparently did for every year in the first decades of the 20th century. Since bridge companies usually provided their own plans at that time, this structure was probably designed by Standard as well.

This bridge is typical of the type of Pratt pony truss popular in the first decades of the 20th century. It was built by Standard Bridge Company of Omaha, a prominent and prolific Nebraska bridge builder.

NAME(S) OF STRUCTURE

Schram Bridge [South Creek Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C002613620P; Dixon County Board of Supervisors' Records, 1897-1920, see specifically 20 February 1907, located at the Dixon County Courthouse, Ponca, Nebraska; field inspection by Fred Quivik, 20 July 1989.

INVENTORIED BY

Lon Johnson, Renewable Technologies, Inc.

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Daily Branch Bridge
NDOR: C002620725

DIXO10

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
township road over Daily Branch; S21/22, T30N, R4E
7.0 miles northwest of Martinsburg; Dixon County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 23)

CONDITION
good

OWNER
Dixon County

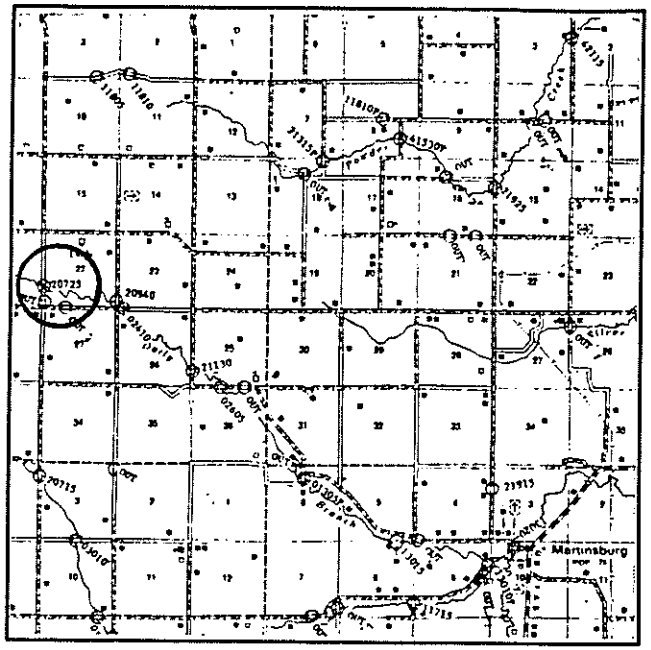
span number:	1	superstructure:	steel, 5-panel, pin-connected Pratt pony truss
span length:	70.0'	substructure:	I-beam pile abutments with timber back- and wingwalls
total length:	71.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	15.6'	other features:	upper chord: 2 channels with cover plate and batten plates; lower chord: punched eyebars; vertical: 2 pair angles with lacing; diagonal: looped eyebars; counters: looped eyebars; floor beam: I-beam; lateral bracing: rods; guardrail: lattice

On July 14, 1903, the Dixon County Board of Supervisors moved that a 32-foot bridge be built on the east side of the southeast quarter of Section 21, Township 30, Range 4, perhaps the site of this structure. At the same meeting, they awarded the annual bridge erection contract to the Standard Bridge Company of Omaha. It appears that Standard built the county's bridges every year from 1900 until at least 1920. Despite the county's meticulous record-keeping, however, there is no reference to when the current, 70-foot span appeared at this location, leading to the conclusion that it may have moved in at a later date. The timber stringers indicate that the truss dates prior to 1913 when use of state standard plans was mandated, since all state truss plans feature I-beam stringers. Given its design and construction, the truss was probably built during the first decade of the 20th century.

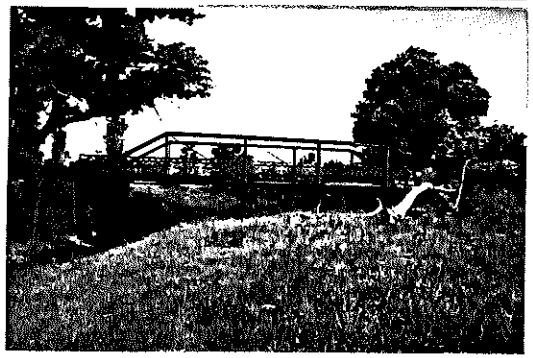
This bridge is typical of many built in Nebraska in the early 20th century. Lack of documentation about the bridge's construction limits its interpretive value.

NAME(S) OF STRUCTURE
Daily Branch Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C002620725; Dixon County Board of Supervisors' Records, 1897-1920, specifically 14 July 1903, located at the Dixon County Courthouse, Ponca, Nebraska; field inspection by Fred Quivik, 22 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Aowa Creek Bridge
NDOR: C002622325P

DIXO11

DATE(S) OF CONSTRUCTION
ca.1920

LOCATION
township road over Aowa Creek; S1, T30N, R5E
3.7 miles northwest of Ponca; Dixon County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 32)

CONDITION
good

OWNER
Dixon County

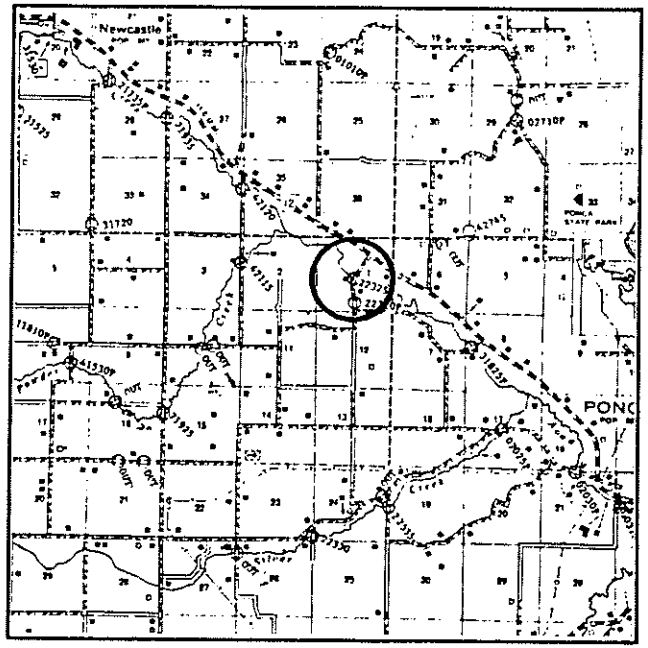
span number:	1	superstructure:	transverse joist through girder; steel stringer approach span each end
span length:	60.0'	substructure:	I-beam pile bents and abutments with timber/sheet piling backwalls
total length:	119.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	16.0'	other features:	I-beams have rod and pipe spacers; guardrail: lattice, channel at approaches

Dixon County was ordering "steel girder" bridges as early as 1906, but it is unclear if these were simply stringer spans. The transverse joist girder design was included among standard state plans by the late 1910s, and had become very popular by the early 1920s. Regardless of inconclusive documentation, therefore, a ca.1920 date thus seems reasonable.

The Aowa Creek Bridge is representative of early attempts by bridge builders to find alternative span designs for use in locations traditionally requiring truss bridges. The manufacture of transverse joist girder bridges could be easily standardized, and on-site construction was quick and required no false work. This design became very popular in Nebraska. An engineer writing in 1927 remarked that over 1,000 bridges of this style had been built in Nebraska since 1917. The transverse joist girder bridge is reported to have been developed in Nebraska by Robert Z. Drake, founder of the Standard Bridge Company. Standard appears to have built bridges in Dixon County virtually every year of the first two decades of the 20th century, and perhaps beyond.

NAME(S) OF STRUCTURE
Aowa Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C002622325P; Dixon County Board of Supervisors' Records, 1897-1920, specifically 28 March 1906, located at the Dixon County Courthouse, Ponca, Nebraska; Ted Johnson, "A Discussion of the Transverse Joist Girder Bridge," **Nebraska Blue Print**, March 1927, pp. 12-13; field inspection by Fred Quivik, 22 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Otter Creek Bridge
NDOR: C002623815

DIXO12

DATE(S) OF CONSTRUCTION
1906-07

LOCATION
township road over Otter Creek; S28/29, T29N, R6E
west edge of Waterbury; Dixon County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 36)

CONDITION
good

OWNER
Dixon County

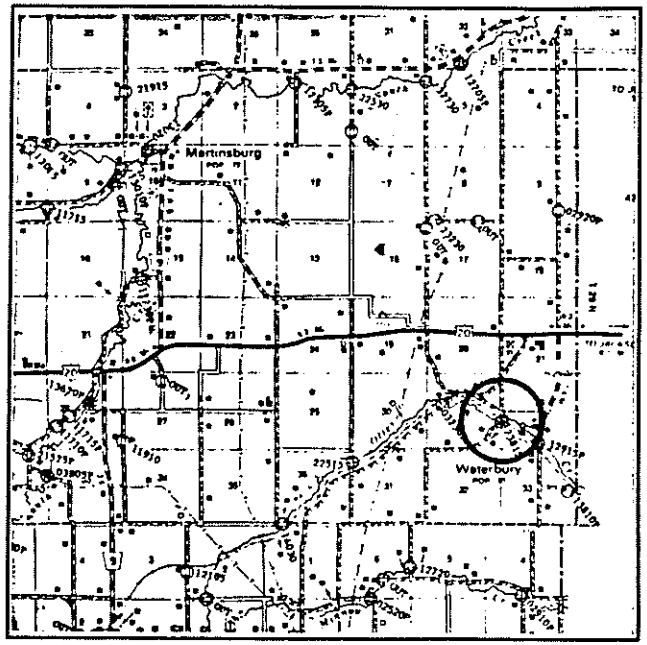
span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt pony truss with steel stringer approach spans
span length:	60.0'	substructure:	I-beam pile bent piers and abutments with timber/sheet piling back- and wingwalls
total length:	95.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	18.4'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 punched eyebars; vertical: 2 pair angles with batten plates; diagonal: punched eyebars; counters: rods; floor beam: I-beam; lateral bracing: round rod with threaded ends; guardrail: 2 channels

On February 20, 1907, the bridge committee of the Dixon County Board of Supervisors delivered a report "on the number, dimension, location and kind of bridge made necessary to construct or repair by reason of the recent floods in Dixon County." Among the recommendations for new construction was a 60-foot span on tubular piers with two, 12-foot approaches to be located just west of Waterbury. The county's bridge book, which sometimes disagrees with the supervisors' records, notes payment of $1,729.73 to Standard Bridge Company in 1906 for a 60-foot structure with approaches totalling 24 feet, located west of Waterbury. It lists the roadway width as 16 feet so, if this is indeed the same bridge, it has been widened. It seems reasonable to conclude that the bridge dates from 1906-7. Standard Bridge Company of Omaha received the county's 1906 and 1907 annual bridge erection contracts, as it apparently did for every year in the first decades of the 20th century. Since bridge companies usually provided their own plans, the bridge was probably designed by Standard as well.

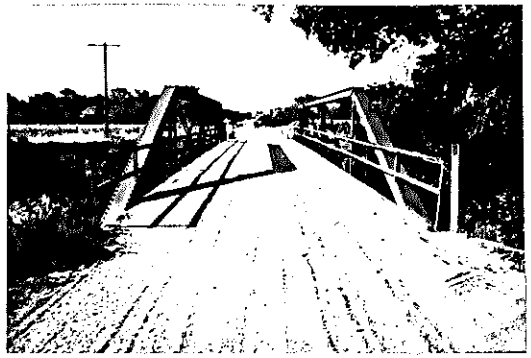
This bridge is typical of the many small structures built by the counties during the first two decades of this century in response to the public's demand for adequate transportation networks. It was built by Standard Bridge Company of Omaha, a prominent and prolific Nebraska bridge builder. Unlike many similar structures, the builder and the construction date for this bridge are documented.

NAME(S) OF STRUCTURE
Otter Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C002623815; Dixon County Bridge Book and Board of Supervisors' Records, 1897-1920, see specifically Board of Supervisors' Records for 20 February 1907, located at the Dixon County Courthouse, Ponca, Nebraska; field inspection by Fred Quivik, 23 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Powder Creek Bridge
NDOR: C002641530P

DIXO13

DATE(S) OF CONSTRUCTION
ca.1918

LOCATION
township road over Powder Creek; SE1/4 S8, T30N, R5E
4.0 miles south of Newcastle; Dixon County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 34)

CONDITION
good

OWNER
Dixon County

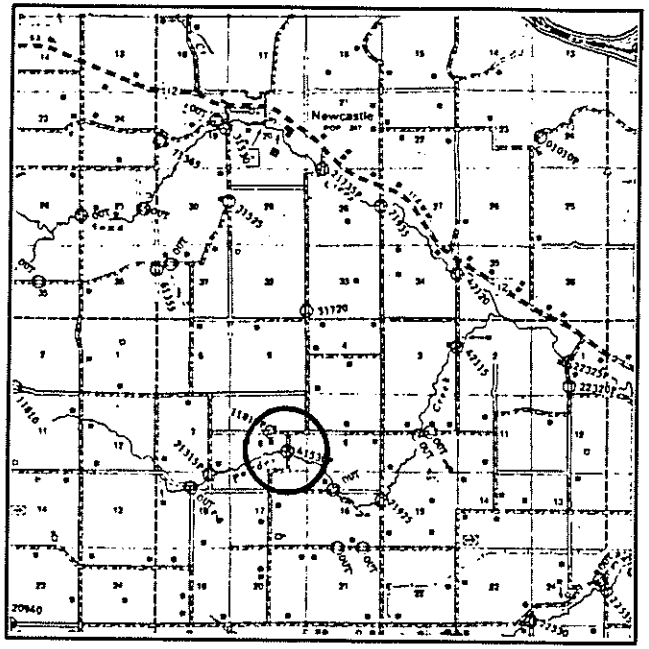
span number:	1	superstructure:	steel, 5-panel, pin- / rigid-connected Pratt pony truss with timber stringer approach span
span length:	80.0'	substructure:	I-beam pile bent pier and abutments with timber back- and wingwalls
total length:	100.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.9'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: punched eyebars; vertical: 2 pair angles with batten plates; diagonal: punched eyebars, looped eyebars (center); floor beam: I-beam; lateral bracing: round rod with threaded ends; guardrail: 2 angles, lattice (new) on approach span

On November 11, 1914, the bridge committee of the Dixon County Board of Supervisors recommended work on a number of bridges, including the repair of a pile bridge "just east of center of Section 8-30-5." There is another bridge near the center of Dixon County as well, so it not certain if this reference is to a predecessor to this 80-foot pony truss. A bridge similar to this span (**DIXO06**) appears to date from 1918.

This is a typical pony truss, designed from state standard plans and dating from the 1910s. It was probably built by the Standard Bridge Company, a prominent and prolific Nebraska bridge builder.

NAME(S) OF STRUCTURE
Powder Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C002641530P; Dixon County Board of Supervisors' Records, 1897-1920, see specifically 11 November 1914, located at the Dixon County Courthouse, Ponca, Nebraska; field inspection by Fred Quivik, 22 July 1989.

INVENTORIED BY	AFFILIATION	DATE
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Powder Creek Bridge
NDOR: C002642115

DIXO14

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
township road over Powder Creek; S2/3, T30N, R5E
4.0 miles southeast of Newcastle; Dixon County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 34)

CONDITION
good

OWNER
Dixon County

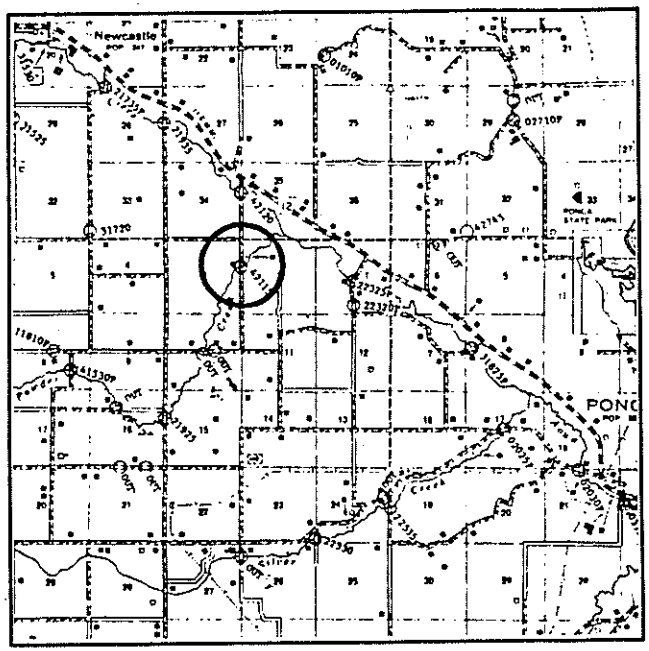
span number:	1	superstructure:	steel, 5-panel, pin- / rigid-connected Pratt pony truss
span length:	80.0'	substructure:	I-beam piles with timber back- and wingwalls
total length:	82.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.8'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: punched eyebars; vertical: 2 pair angles with batten plates; diagonal: punched eyebars, looped eyebars (center); strut: steel strap; floor beam: I-beams; lateral bracing: rods; guardrail: 2 channels

According to an entry in the Dixon County bridge book, the county paid $240.00 to the Standard Bridge Company on February 20, 1901, for construction of a 48-foot wood bridge with a 14-foot roadway on the east side of the northeast quarter of Section 3, Township 30, Range 5. The county's bridge book indicates that in 1907, Standard built another bridge at this site, this time a 62-foot wood pile structure costing $337.00. On November 13, 1912, the bridge committee of the Dixon County Board of Supervisors recommended the repair of a bridge at that location. Specifically, the committee advised that three 20-foot wood piles be repaired, one new 24-foot joist be added, and "new rail [placed] over the entire bridge." The existing bridge was apparently erected here at a later date. A similar span (DIXO06) appears to date from 1918.

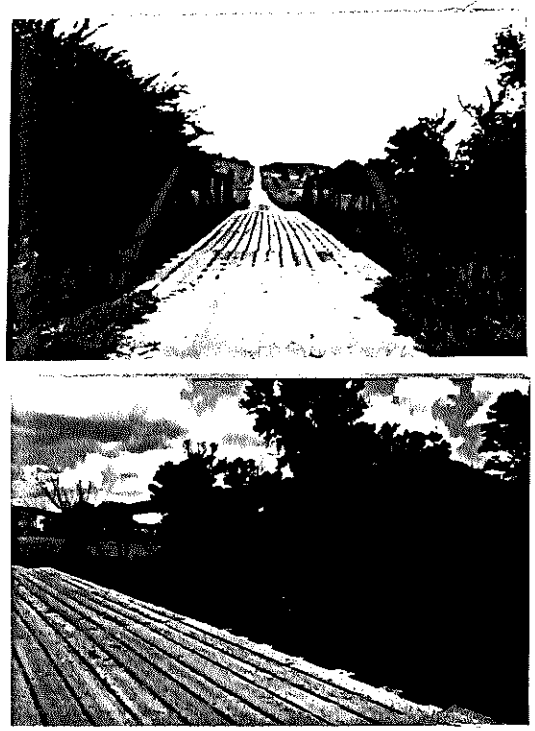
This is a typical pony truss, designed from state standard plans and dating from the 1910s. It was probably built by the Standard Bridge Company, a prominent and prolific Nebraska bridge builder.

NAME(S) OF STRUCTURE
Powder Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C002642115; Dixon County Bridge Book and Board of Supervisors' Records, 1897-1920, see specifically Board of Supervisors' Records for 20 February 1901 and 13 November 1912, located at the Dixon County Courthouse, Ponca, Nebraska; field inspection by Fred Quivik, 22 July 1989.

INVENTORIED BY	AFFILIATION	DATE
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Fremont Ditch Bridge
NDOR: C002703410

DODG01

DATE(S) OF CONSTRUCTION
1908

LOCATION
township road over Fremont Cutoff Ditch; S19/30, T18N, R7E
4.5 miles northwest of Ames; Dodge County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 43)

CONDITION
good

OWNER
Dodge County

span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt half-hip pony truss
span length:	60.0'	substructure:	built-up H-beam piles with timber back walls (east), west abutment not visible
total length:	60.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	15.9'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars; vertical: 2 pair angles with batten plates; diagonal: square eyerods; counter: eyerod with turnbuckle; floor beam: I-beam; lateral bracing: round rod with threaded ends; guardrail: lattice

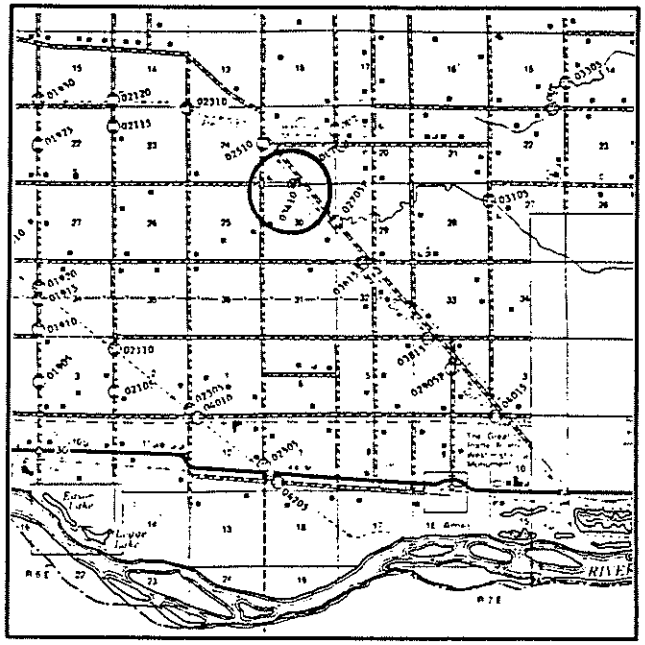
In November 1908, the Dodge County Supervisors awarded the annual contract for 1909 to the Standard Bridge Company of Omaha and ordered a 60-foot steel bridge over the Fremont Cut-off "west of the beet sugar factory in Maple Township." This is likely the Fremont Ditch Bridge. Completed later that year, the structure was configured as a pinned Pratt half-hip pony truss, supported by steel H-pile piers made up of riveted channels. The Fremont Ditch Bridge still carries traffic in essentially unaltered condition.

The half-hip design was popular in the late 19th and early 20th centuries because omission of verticals at the hips reduced the cost of materials and, hence, the cost of the bridge. Built-up I-beam piles visible on the east abutment are early examples of a substructure type developed in 1902 by Robert Z. Drake, founder of Standard Bridge Company. This bridge is also significant for its association with the Fremont Ditch, part of an extensive network of drainage ditches built by the county.

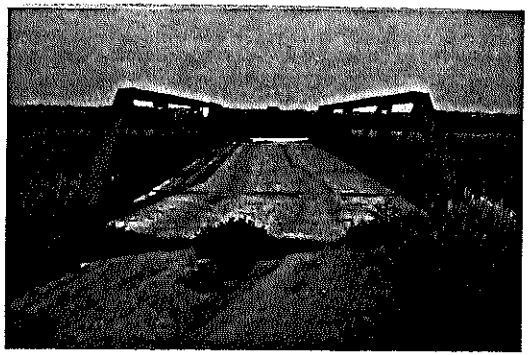
NAME(S) OF STRUCTURE

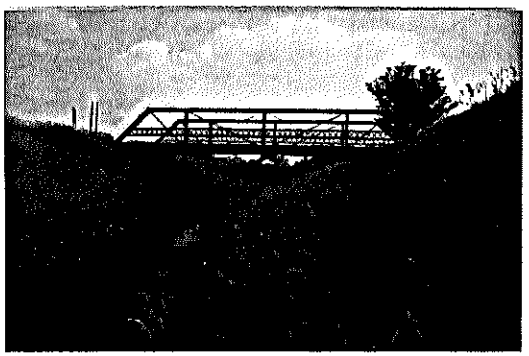
Fremont Ditch Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C002703410; Proceedings of the Dodge County Board of Supervisors, 10 November 1908, located at the Dodge County Courthouse, Fremont, Nebraska; field inspection by Lon Johnson, July 1989.

INVENTORIED BY	AFFILIATION	DATE
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Logan Creek Bridge
NDOR: C002740817

DODG02

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
township road over Logan Creek; S16/21, T20N, R8E
2.9 miles southwest of Uehling; Dodge County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 32)

CONDITION
good

OWNER
Dodge County

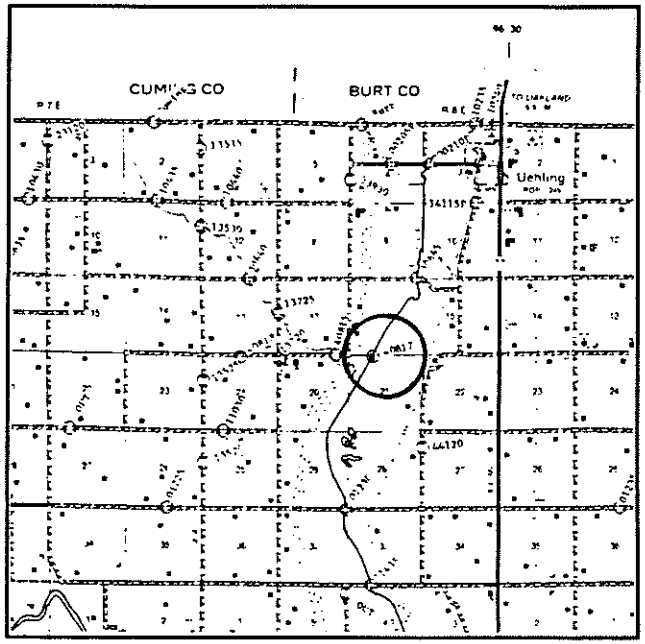
span number:	1	superstructure:	steel, 5-panel, pin-connected Pratt pony truss with steel stringer approaches
span length:	70.0'	substructure:	steel pile bent piers with I-beam ice guards; steel/timber pile abutments
total length:	125.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	16.3'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 punched rectangular eyebars; vertical: 2 pair angles with lacing; diagonal: square eyerods; counter: eyerod with turnbuckle; floor beam: I-beam; guardrail: lattice

This Pratt pony truss bridge carries an unpaved east-west road over Logan Creek. County records do not refer specifically to this structure. The bridge was probably built in the first decade of the 20th century by the Standard Bridge Company of Omaha, a prominent and prolific builder of the day. Standard received the county's annual bridge construction contract for nearly every year from 1902 to 1919. The company probably supplied the plans as well, a common practice prior to 1913, when the state required issue of plans developed by the state engineer's office. The bridge rests on I-beam pile piers, from which wedge-shaped ice guards built of I-beams with I-beam supports project upstream.

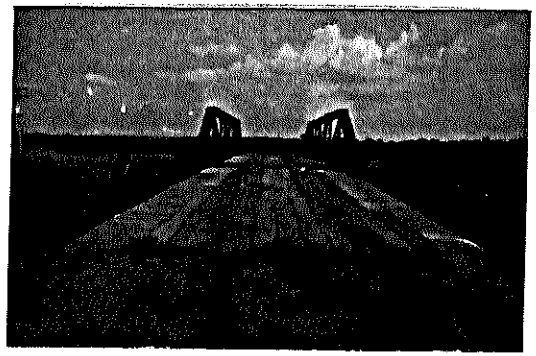
This bridge retains excellent integrity, serving as a well-preserved example of an extremely common structural type probably erected by a prolific early twentieth-century Nebraska bridge builder. The I-beam ice guards on the piers are unusual.

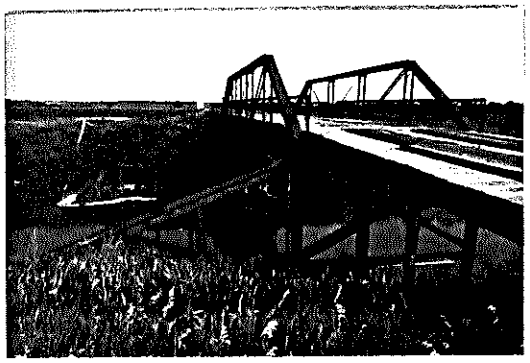
NAME(S) OF STRUCTURE
Logan Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C002740817; Dodge County Supervisors' Records, 1894-1919, located at Dodge County Courthouse, Fremont, Nebraska; field inspection by Lon Johnson, July 1989.

INVENTORIED BY	AFFILIATION	DATE
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Elkhorn River Bridge
NDOR: S275 12587

DODG03

DATE(S) OF CONSTRUCTION
1932

LOCATION
U.S. Highway 275 over the Elkhorn River; S11, T20N, R6E
southern edge of Crowell; Dodge County, Nebraska

USE (ORIGINAL / CURRENT)
highway bridge / highway bridge

RATING potentially NRHP eligible (score: 48)

CONDITION
excellent

OWNER
Nebraska Department of Roads

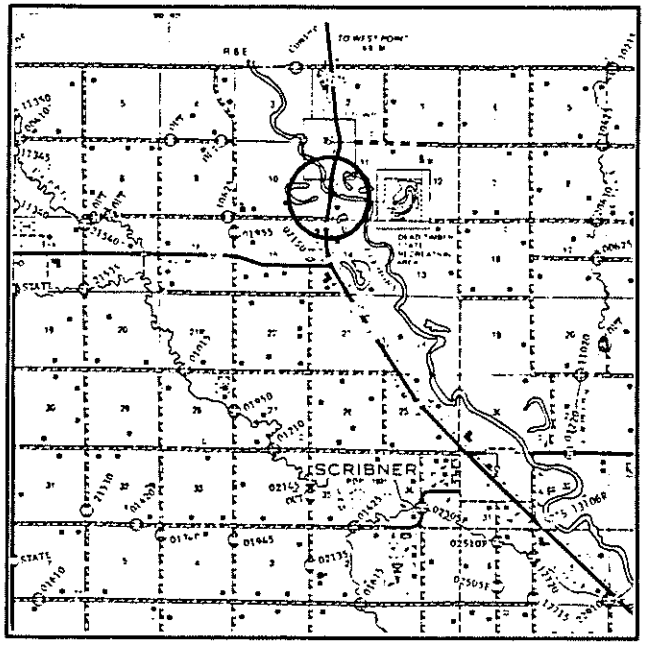
span number:	1	superstructure:	steel, rigid-connected Parker through truss with steel girder approach spans
span length:	160.0'	substructure:	concrete abutments, wingwalls and piers
total length:	382.0'	floor/decking:	concrete deck over I-beam stringers
roadway wdt.:	23.0'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 channels with batten plates; vertical and diagonal: wide flange; horizontal stiffener: 2 angles with lacing; top lateral bracing: 2 angles with lacing; strut: angle; portal bracing: angles with lacing; floor beam: I-beam; bottom lateral bracing: angles; guardrail: angles

In 1932 the Nebraska Bureau of Roads and Bridges acted to replace the existing three-span truss over the Elkhorn River on Highway No. 8 (now U.S. 275), on the souther nedge of Crowell. As delineated by bureau engineers, the replacement structure consisted of a single 160-foot channel span, flanked on both sides by steel stringer approaches. The channel span featured a rigid-connected Parker through truss - the type of standardized long-span configuration that the bureau had used on other bridges such as the Woodlawn Bridge and the Columbus Loup River Bridge (**PLAT04**). Competitive proposals were solicited under Project No. 266-A(1), and the Omaha Steel Works received the contract to fabricate and erect the structure. Since its completion, the Elkhorn River Bridge has carried traffic, with maintenance-related deck work in 1967 and 1973 as the only alterations of note.

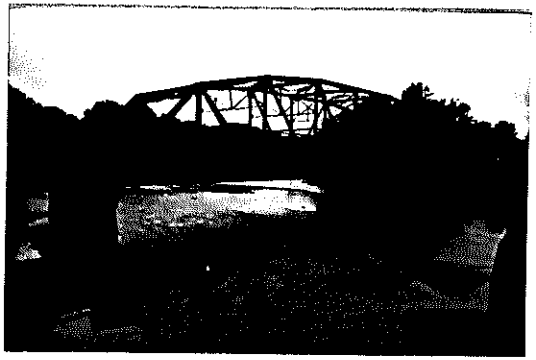
This bridge is an example of a Depression-era project undertaken with the support of federal relief funds. These projects were designed both to improve the country's infrastructure and to provide work for those unemployed as a result of the Depression. The truss typifies the rigid-connected technology employed by the bureau of roads on the few trussed crossings that it built in the 1930s.

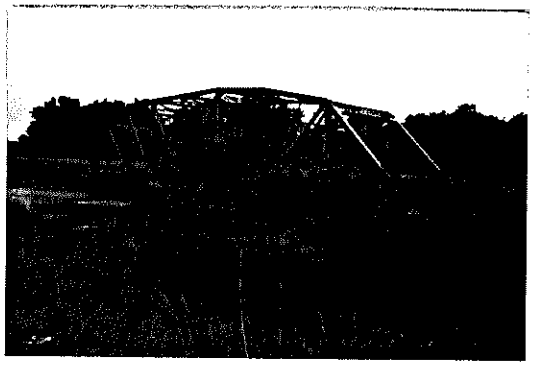
NAME(S) OF STRUCTURE
Elkhorn River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number S275 12587; Nebraska Department of Roads and Irrigation, **Twentieth Biennial Report, 1933-34**, pp. 42, 47, 147, and **Twenty-first Biennial Report, 1935-36**, p. 36; "381'-7-1/2" Multiple Span Bridge, Project 266-A, State Road: Hooper-West Point," original construction drawings by Nebraksa Bureau of Roads and Bridges, 20 August 1932, located at Nebraska Department of Roads, Lincoln, Nebraska; field inspection by Lon Johnson, July 1989.

INVENTORIED BY	**AFFILIATION**	**DATE**
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Fremont Viaduct [Bell Street Overpass] DODG04
NDOR: S275 15289

DATE(S) OF CONSTRUCTION
1936

LOCATION
Bell Street over Chicago and North Western Railroad; S24, T17N, R8E
Fremont; Dodge County, Nebraska

USE (ORIGINAL / CURRENT)
highway bridge / highway bridge

RATING potentially eligible (score: 46)

CONDITION
excellent

OWNER
Nebraska Department of Roads

span number:	13	superstructure:	steel stringer
span length:	65.0'	substructure:	concrete abutments and concrete piers
total length:	790.0'	floor/decking:	concrete deck over I-beam stringers
roadway wdt.:	24.0'	other features:	concrete piers have shallow arched sills; concrete balustrade; sidewalk on east side; impressed in the concrete: "Capacity 20-tons; 209-D-1, 1936

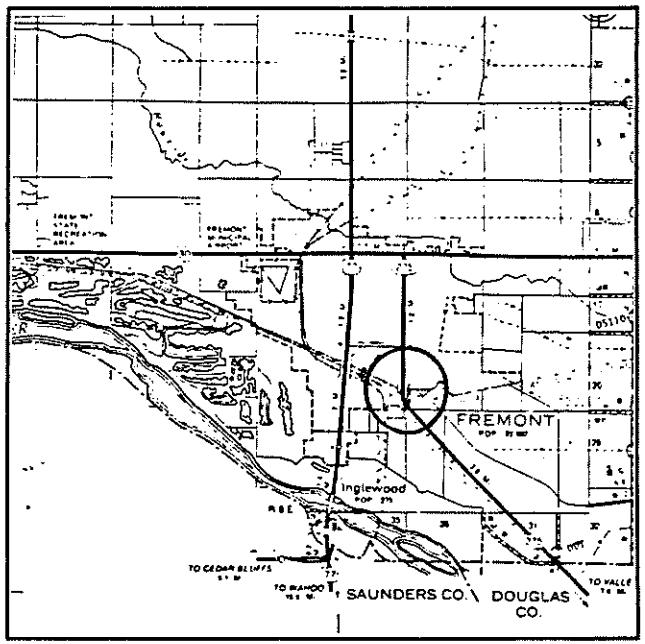
The Fremont Viaduct, a 13-span steel stringer bridge, rests on concrete abutments and concrete piers joined with a shallow arched sill beam. The deck is concrete with a sidewalk on the east side, enframed by a concrete balustrade with newer lamp standards. Impressed in the concrete is: "Capacity 20 tons, 209-D-1, 1936." As indicated by this inscription, the viaduct was constructed in 1936 to eliminate a railroad grade crossing on one of the two major north-south streets in Fremont. The nearby Broad Street Viaduct was also constructed the same year, but it has recently been extensively rehabilitated. In July 1936, the Fremont voters approved the issuance of bonds to pay damage claims to property and businesses which would be affected by the construction of the two viaducts. Construction costs were funded as WPGM Project 209-D-1, one of the federally sponsored programs created by the Hayden-Cartwright Act of 1934 which included provisions for the separation of traffic at railroad crossings. Fabricated at the Gary, Indiana, shops of the American Bridge Company, the Bell Street structure stretched 783 feet with a 24-foot roadway and one 5-foot sidewalk, according to the Department of Roads' 1935-36 **Biennial Report**. It was one of twelve grade separations placed under contract by the state in 1936 at a total expense of $832,245.

As an important crossing of the Chicago and North Western Railroad tracks, the Fremont Viaduct formed an integral part of the City of Fremont's street system. The viaduct is also significant as one of the railroad separation projects funded through the New Deal Hayden-Cartwright Act. Federal relief programs of the 1930s broke with past practice by allowing federal funds to be used for urban, as well as rural, highways. Grade separation was a major focus of the Department of Roads and Irrigation during this period, requiring commitment of much staff time. A state report noted that in 1935-36 "approximately half of the bridge construction calling for detailed design plans and estimates to be furnished by the Division of Bridge Design has been confined to Works Program grade separations."

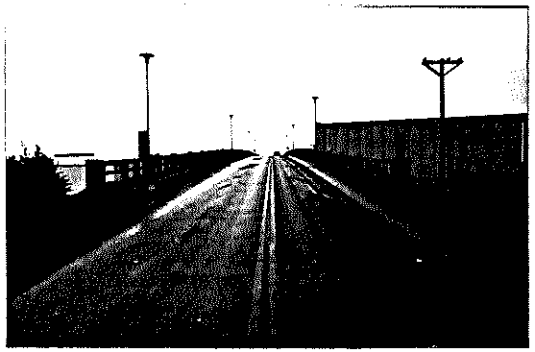
NAME(S) OF STRUCTURE

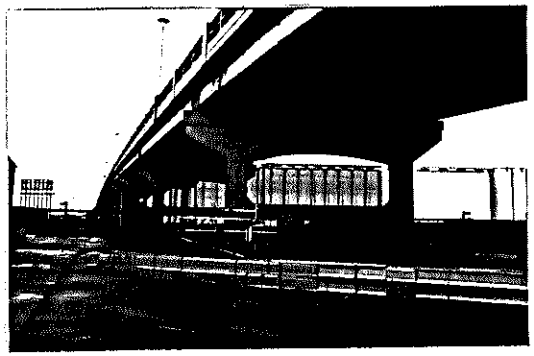
Fremont Viaduct [Bell Street Overpass]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number S275 15289; bridge plate; Proceedings of the Fremont City Council, 13 July 1936, located at the Fremont City Hall, Fremont, Nebraska; Nebraska Department of Roads and Irrigation, **Twenty-First Biennial Report**, 1935-36, pp. 121-123; field inspection by Lon Johnson, July 1989.

INVENTORIED BY	**AFFILIATION**	**DATE**
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Waterloo Bridge DOUG01
NDOR: C002801404P

DATE(S) OF CONSTRUCTION
1923

LOCATION
park access road over the Elkhorn River; S3/10, T15N, R10E
Waterloo - SE Jct. US 275/N64 0.6 miles east; Douglas County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / closed

RATING NRHP non-eligible (score: 34)

CONDITION
good

OWNER
Douglas County

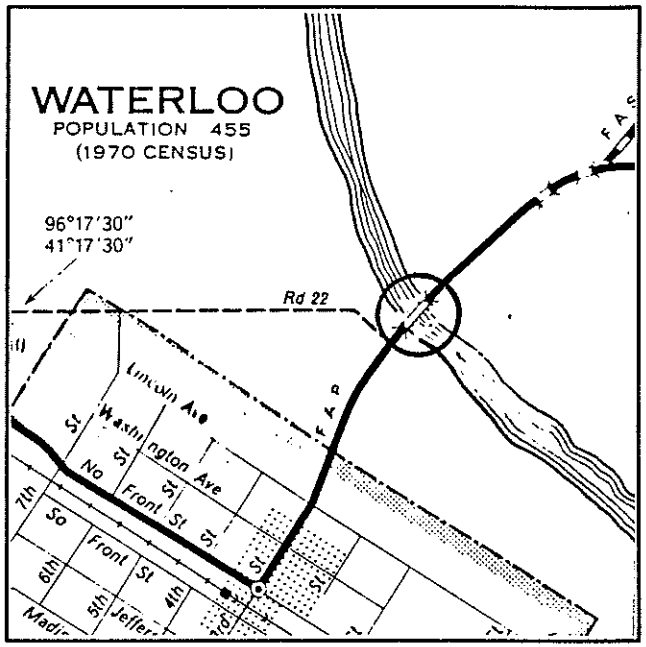
span number:	1	superstructure:	steel, 8-panel, riveted Pratt through truss with two 2-panel, Warren pony approach spans
span length:	148.0'	substructure:	steel pile abutments with timber back- and wingwalls
total length:	312.0'	floor/decking:	concrete deck over steel stringers
roadway wdt.:	19.4'	other features:	upper chord: back-to-back channel beams with cover plate and lacing; lower chord: 4 angles connected by battens; verticals: 4 angles connected by battens; diagonals: 2 angles with battens; counters: 2 angles with battens; portal and sway bracing: angles; floor beams: I-beams; bottom laterals: angles; railings: angles

A bridge had been located at this site prior to the current structure. By 1923, however, the earlier structure had become obsolete, as reported by M. Blair, highway department Division 2 engineer: "A few nights ago, I had occasion to cross the Waterloo bridge at Waterloo and was met by a large truck on the main span and through good fortune I did no damage to myself or car but never the less it caused me a certain [amount] of unrest, and I came to the conclusion at that time that this bridge was too narrow to take care of the traffic and the type of trucks using this highway." He recommended that the bridge be replaced as soon as possible, adding "I believe that this will save the county a law suit in the future." In response to a request from the county, state engineer R.L. Cochran estimated that a 150-foot span and an 80-foot span, both 20-feet wide, plus abutments and piers, would cost $35,621.95. It is unclear from the records if this was the amount actually expended. The new structure was built by Allied Contractors, an Omaha firm formed in 1920, which received the county's annual contract for bridge construction in 1923. The president of Allied, John W. Towle, was also head of Omaha Structural Steel Works, a prominent bridge fabricator. Since Douglas County adopted state standard bridge plans in 1913, the design of this bridge was presumably based on state plans.

With a span of 148 feet, this structure is a relatively long through truss. It was erected by Allied Construction whose president, John W. Towle, was an important figure in Nebraska bridge construction for many decades. The background behind the bridge's construction is well documented, and shows how the state assisted counties with bridge design.

NAME(S) OF STRUCTURE
Waterloo Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C002801404P; M. Blair to L.E. Adams, letter, 3 June 1923, and R.L. Cochran to L.E. Adams, letter 7 August 1923, and other records in file for Bridge C002801404P (#553), located in vault of Douglas County Highway Building, Omaha, Nebraska; Douglas County Commissioners' Records, Book 14, page 169, 14 February 1923, at Douglas County Courthouse, Omaha, Nebraska; field inspection by Robert M. Frame, 26 October 1989.

INVENTORIED BY	AFFILIATION	DATE
Charlene K. Roise	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Big Papillion Creek Bridge DOUG02
NDOR: C002801405P

DATE(S) OF CONSTRUCTION
1921

LOCATION
Old Maple Road at 118th Street over Big Papillion Creek; S5, T15N, R12E
Omaha; Douglas County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 34)

CONDITION
good

OWNER
Douglas County

span number: 1
span length: 100.0'
total length: 141.0'
roadway wdt.: 17.5'

superstructure: steel, 5-panel, rigid-connected Pratt pony truss with steel stringer approach span
substructure: steel piles with timber backwall (east) and steel pile bents with no abutment visible (west)
floor/decking: concrete deck over I-beam stringers
other features: upper chord: back-to-back channel beams with cover plate and lacing; lower chord: 2 angles with battens; verticals: 4 angles with battens; diagonals: 2 angles with battens; counters: 2 angles with battens; bracing: transverse threaded rod through stringers, outriggers; floor beams: I-beams; bottom laterals: threaded round rods; railings: channels on angle posts

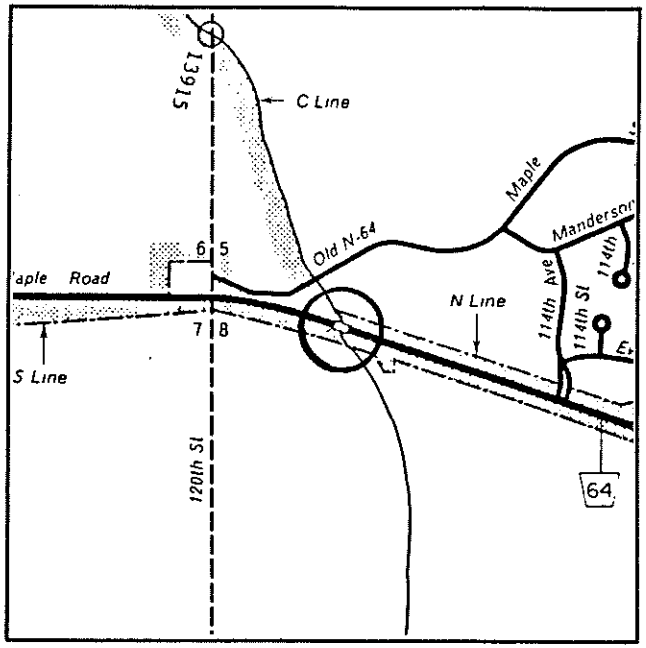
According to county bridge records, a bridge made of five 20-foot timber spans with a 16-foot roadway was built at this site in 1907. This was replaced in 1921 by the current structure, which was fabricated by Omaha Structural Steel, a prominent Omaha firm organized by John W. Towle in 1906. Towle was also the president of Allied Contractors of Omaha, which was formed in 1920 and was responsible for the truss's erection. Allied received the county's annual contract for bridge construction in 1921. Since Douglas County adopted state standard bridge plans in 1913, the design of this bridge was presumably based on state plans.

The Big Papillion Creek Bridge is typical of the many riveted Pratt pony trusses built throughout Nebraska in the 1910s and 1920s. It was built by Allied Contractors whose president, John W. Towle, was a prominent bridge builder for many decades.

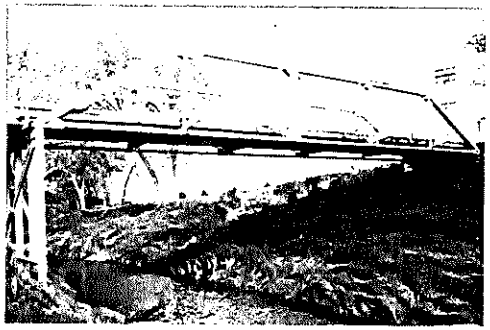
NAME(S) OF STRUCTURE

Big Papillion Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C002801405P; bridge files for Bridge Number C002801405P (#219), located in vault of Douglas County Highway Building, Omaha, Nebraska; Douglas County Commissioners' Records, Book 9, page 701, 8 October 1920, at Douglas County Courthouse, Omaha, Nebraska; inspection by Robert M. Frame, 26 October 1989.

INVENTORIED BY

Charlene K. Roise

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Rawhide Creek Bridge
NDOR: C002801525

DOUG03

DATE(S) OF CONSTRUCTION
ca.1925

LOCATION
county highway over Rawhide Creek; S5/6, T15N, R12E
5 miles north, 1 mile east of Valley; Douglas County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 17)

CONDITION
good

OWNER
Douglas County

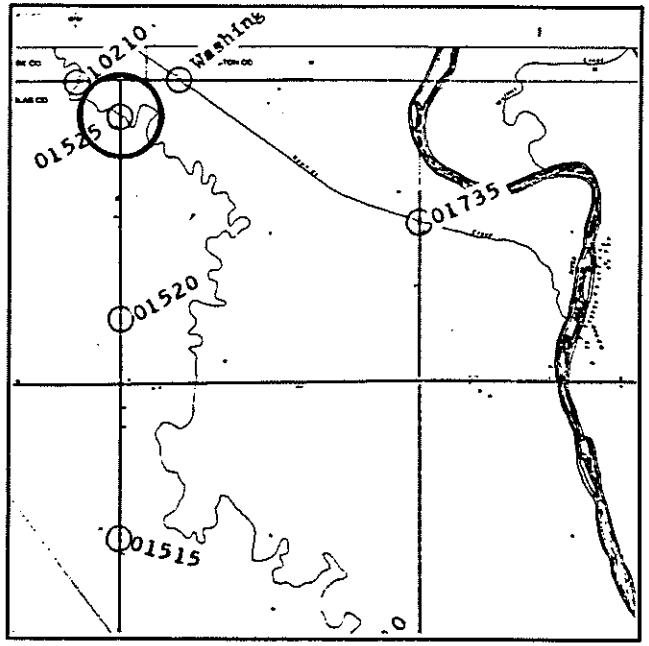
span number:	1	superstructure:	steel through girder
span length:	40.0'	substructure:	concrete abutments with concrete back- and wingwalls
total length:	42.0'	floor/decking:	concrete deck over transverse stringers
roadway wdt.:	16.0'	other features:	transverse I-beam floor beams stretch from girder to girder, bolted with angles; 2 rods run length of bridge; lattice railing

Old files on this bridge (formerly #460) indicate that there was a wooden bridge with three, 20-foot spans on this site until 1915, when it was replaced by a 40-foot, three-panel, pin-connected pony truss. The records, which continue through 1940, do not mention the current structure. The bridge's transverse joists, however, reflect a design popular in Nebraska in the 1920s. In addition, lattice railing was little used by the 1930s. It thus appears that the bridge dates from the 1920s. Since Douglas County adopted state standard bridge plans in 1913, the design of this bridge was presumably based on state plans.

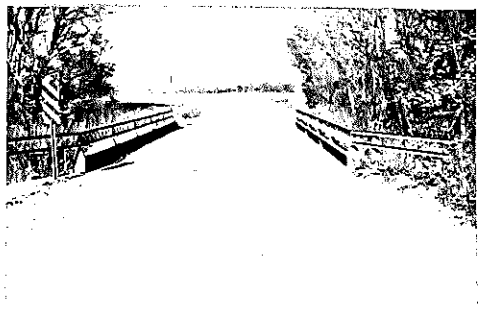
The transverse joist girder design was developed in Nebraska, and it was extremely popular in the state in the 1920s. This is a well-preserved example of a small bridge built in this style.

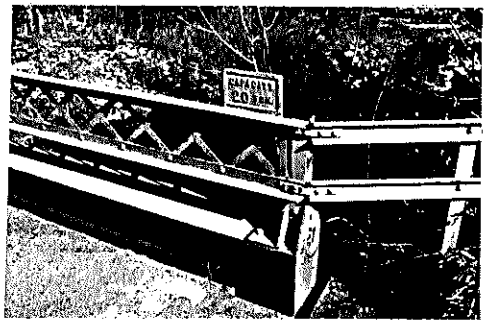
NAME(S) OF STRUCTURE
Rawhide Creek Bridge

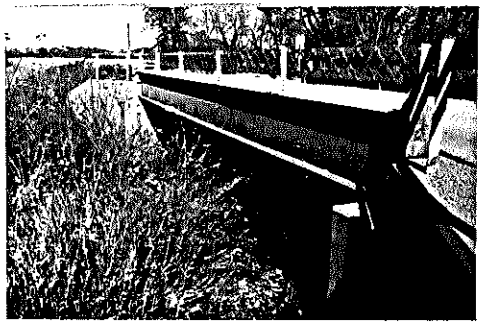
PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP







SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C002801525; bridge files for Bridge Number C002801525 (#460), located in vault of Douglas County Highway Building, Omaha, Nebraska;field inspection by Robert M. Frame, 27 October 1989.

INVENTORIED BY	AFFILIATION	DATE
Charlene K. Roise	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C002801805

DOUG04

DATE(S) OF CONSTRUCTION
1928

LOCATION
county highway over unnamed stream; S10/15, T16N, R10E
0.5 mile south of Waterloo; Douglas County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 29)

CONDITION
very good

OWNER
Douglas County

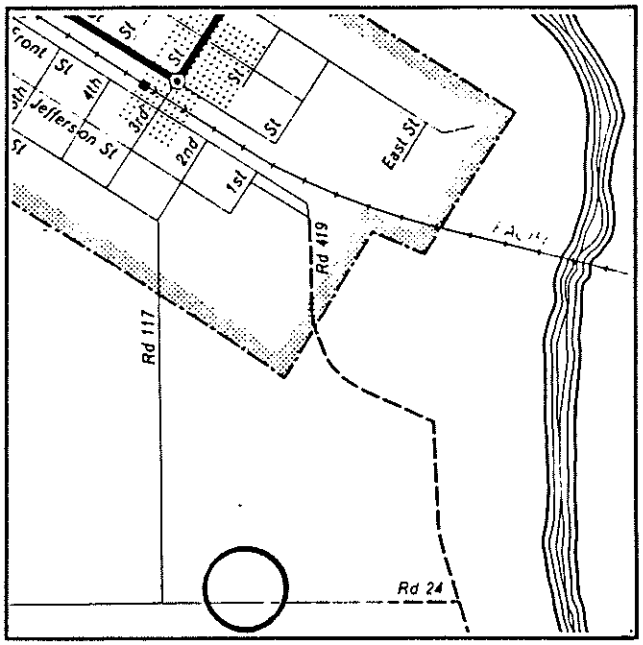
span number:	1	superstructure:	steel stringer
span length:	24.0'	substructure:	concrete abutments with concrete back- and wingwalls
total length:	26.0'	floor/decking:	concrete slab over steel stringers
roadway wdt.:	18.0'	other features:	channels on outer edges with eight I-beam stringers in between; channel railings on angle posts

This bridge replaced a 32-foot span wood bridge that was built on this site in 1912. Notes in the Douglas County files about Bridge Number 573 (now C002801805) reveal that eight 12-inch by 26-foot joists and two 12-inch by 26-foot channels were used for the new structure. Construction began May 9, 1928, and the project was completed by May 17 under the supervision of R.O. Grayson, foreman for Allied Contractors. It was built for a 20-ton capacity. Since Douglas County adopted state standard bridge plans in 1913, the design of this bridge was presumably based on state plans. It was erected by Allied Construction whose president, John W. Towle, was an important figure in Nebraska bridge construction for many decades.

This is a well-documented example of an utilitarian bridge type used frequently throughout Nebraska in the early decades of the twentieth century. The first bridge of this type known to have been built in Douglas County was ordered by the County Commissioners in 1902.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C002801805; bridge files for Bridge Number C002801805 (#573), located in vault of Douglas County Highway Building, Omaha, Nebraska; Douglas County Commissioners Records, Volume U, p. 750, 10 November 1902, located in the Douglas County Courthouse, Omaha, Nebraska; field inspection by Robert M. Frame, 26 October 1989.

INVENTORIED BY	AFFILIATION	DATE
Charlene K. Roise	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C002802405P

DOUG05

DATE(S) OF CONSTRUCTION
1917-18

LOCATION
county highway over unnamed stream; S34, T15N, R10E
3.7 miles south of Waterloo; Douglas County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 30)

CONDITION
very good

OWNER
Douglas County

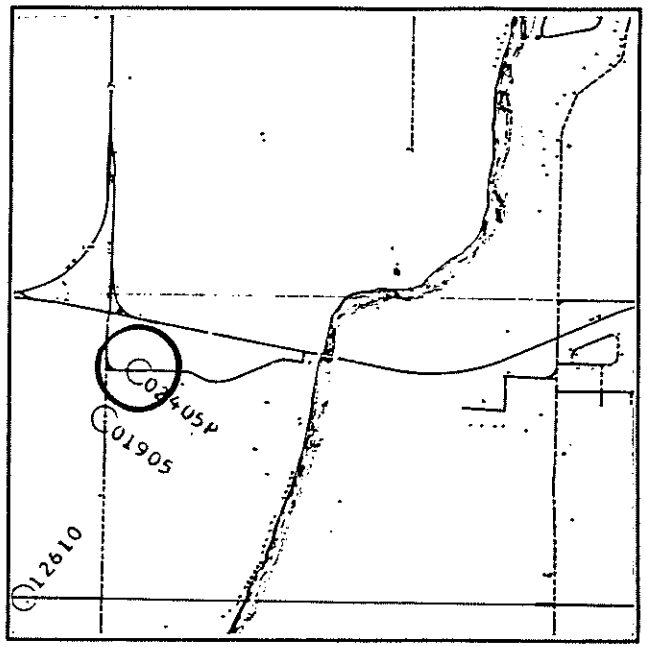
span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt pony truss
span length:	80.0'	substructure:	concrete abutments with concrete back- and wingwalls
total length:	82.0'	floor/decking:	concrete deck over I-beam stringers
roadway wdt.:	19.8'	other features:	upper chord: back-to-back channel beams with cover plate and lacing; lower chord: punched eye-bars; verticals: 4 angles with battens; diagonals: punched eye-bars; counters: looped round rods; bracing: through deck; floor beams: I-beams with square truss bar, which is bolted to beam ends and has turnbuckle; floor beam connected to superstructure by riveted hanger plates; bottom laterals: threaded round rods

Douglas County files for Bridge #596 (now C002802405P) contain estimates for the construction of this bridge, a plan of the abutments and work reports. The county ordered a four-panel, 80-foot, pin-connected low truss with a 16-foot roadway and 15-ton capacity from Omaha Structural Steel on July 28, 1917. All field connections were to be riveted. The bridge apparently replaced a wooden bridge with four, 20-foot spans. Plans for the new superstructure were provided by the State Engineer. Omaha Structural Steel, a prominent Nebraska bridge firm founded in 1906 by John W. Towle, submitted plans for the abutments on August 3, 1917. The company began construction on March 22 of the following year, and completed work by April 17. In 1925, the county hired Allied Contractors, a firm in which Towle was also involved, to move and widen the bridge. Work started April 26 and continued until May 29, by which point the structure was widened, placed on new abutments, and given a concrete deck. Cost for the renovation was $5,081.96.

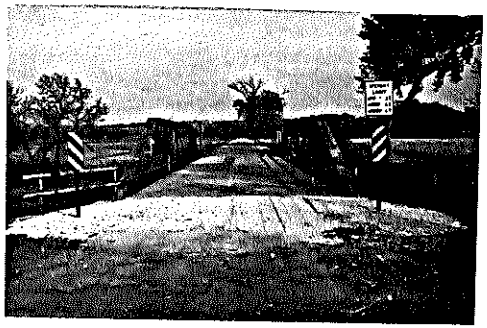
This is a well-documented example of the type of pony truss commonly built in Nebraska in the 1910s and 1920s. It was erected by the Omaha Structural Steel Bridge Company, whose president, John W. Towle, was an important figure in Nebraska bridge construction for many decades.

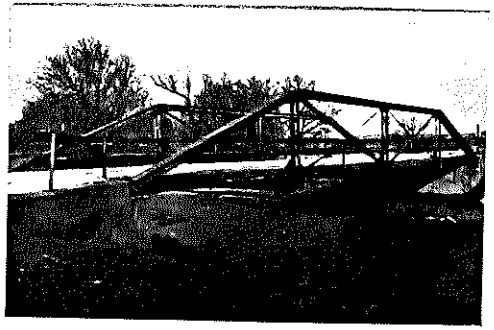
NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C002802405P; bridge files for Bridge Number C002802405P (#596), located in vault of Douglas County Highway Building, Omaha, Nebraska; Douglas County Commissioners' Records, Book 5, p. 251, 28 July 1917, at Douglas County Courthouse, Omaha, Nebraska; field inspection by Robert M. Frame, 26 October 1989.

INVENTORIED BY
Charlene K. Roise

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Harrison Street Bridge [Papillion Creek Bridge] DOUG06
NDOR: C002803005

DATE(S) OF CONSTRUCTION
1932-33

LOCATION
Harrison Street over West Branch of Papillion Creek; S7, T14N, R11
3 miles west of North 85 at Sarpy County Line; Douglas County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 24)

CONDITION
good

OWNER
Douglas County

span number:	1	superstructure:	steel, 5-panel, rigid-connected Pratt pony truss with steel stringer approach spans
span length:	100.0'	substructure:	timber/steel pile abutments, back- and wingwalls; steel pile bent piers
total length:	140.0'	floor/decking:	timber deck over I-beam and wooden stringers
roadway wdt.:	19.8'	other features:	upper chord: back-to-back channel beams with cover plate and lacing; lower chord: back-to-back channels with battens top and bottom; verticals: 4 angles with battens; diagonals: 2 angles with battens; counters: 2 angles with battens; bracing: through deck; floor beams: I-beams reinforced with additional H-beams welded(?) to bottom edge; bottom laterals: threaded round rods; railings: channels mounted on angle posts

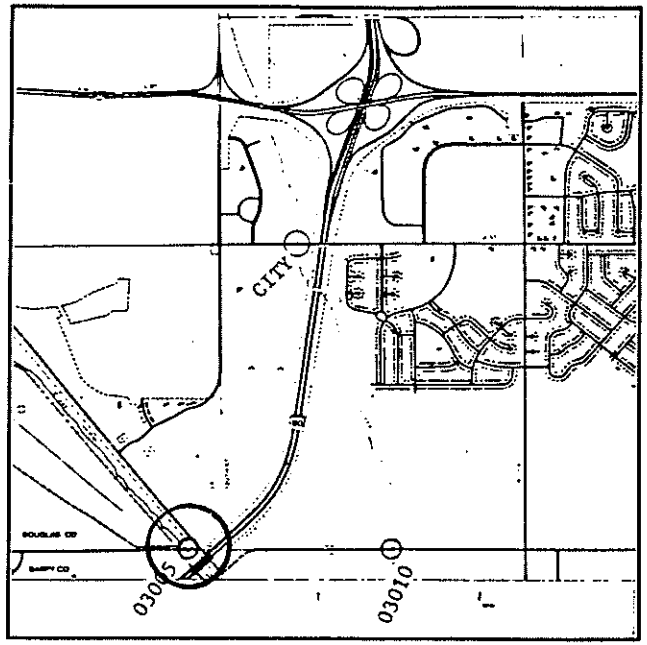
This crossing was once served by a 62-foot wooden bridge consisting of two 16-foot spans and one 30-foot span. A 50-foot, pin-connected pony truss replaced the wooden bridge in 1914, but it was destroyed by floods in 1932. On September 20th of that year, Douglas County Commissioners "resolved that Sarpy County be and is hereby authorized and directed to construct County Line Bridge #310, which is to be a 100' span, 20' steel approach on each end, 20' roadway." Sarpy County had proposed on September 12 that Douglas County pay half the cost of a bridge at that location based on a 16-foot roadway. Douglas County agreed, but insisted that the bridge have a 20-foot roadway and decided to pay for any additional expense resulting from the wider structure. The appearance of wooden stringers on the existing bridge perhaps indicates that some material was salvaged from the previous structure.

This bridge is typical of the riveted Pratt pony trusses built in Nebraska in the late 1920s and early 1930s.

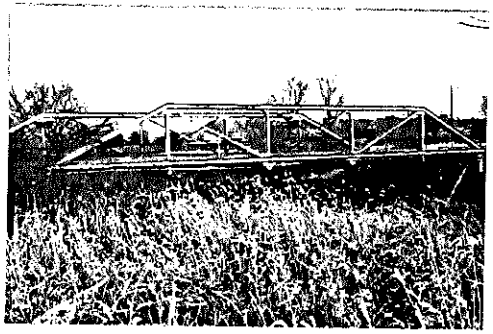
NAME(S) OF STRUCTURE

Harrison Street Bridge [Papillion Creek Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C002803005; bridge files for Bridge Number C002803005 (#310), located in vault of Douglas County Highway Building, Omaha, Nebraska; Douglas County Commissioners' Records, Book 33, p. 158, 20 September 1932, at Douglas County Courthouse, Omaha, Nebraska; field inspection by Robert M. Frame, 26 October 1989.

INVENTORIED BY	AFFILIATION	DATE
Charlene K. Roise	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
168th Street Bridge [Papillion Creek Bridge] DOUG07
NDOR: C002813125

DATE(S) OF CONSTRUCTION
1927

LOCATION
168th Street over West Branch of Papillion Creek; S3/4, T15N, R11E
0.3 mile north of 168th Street/North 64; Douglas County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 34)

CONDITION
very good

OWNER
Douglas County

span number: 1
span length: 100.0'
total length: 102.0'
roadway wdt.: 17.5'

superstructure: steel, 5-panel, rigid-connected Pratt pony truss
substructure: concrete abutments, back- and wingwalls
floor/decking: concrete over I-beam stringers
other features: upper chord: back-to-back channel beams with cover plate and X-lacing; lower chord: back-to-back channels with battens top and bottom; verticals: 4 channels and plate; diagonals and counters: 2 channels and battens; bracing: through deck; floor beams: I-beams; bottom laterals: angles; railings: angles on angle posts

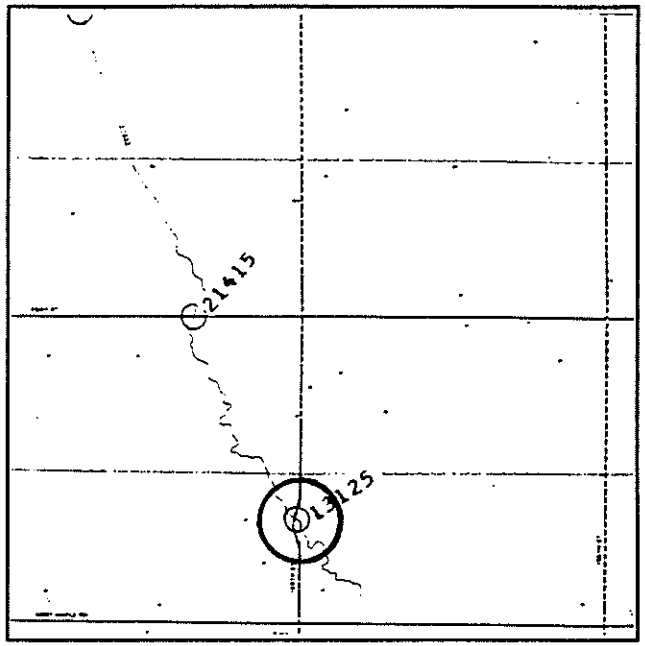
By 1913, there were two wooden bridges about 75 feet apart on this road: #230 was an 80-foot long with four spans, and #231 was 32-feet long with two spans. Bridge Number C002813125 was apparently built in 1927 as #231, but was located at the site of #230. On April 12, 1927, Douglas County Commissioners moved that "a 100 foot x 18 foot bridge be built on new location of Road #64, Bridge #231, W.S. Section 3-15-11, West McArdle." A note in the file for #231 says: "Old span sold, and removed by farmers." The new structure was designed from state standard plans for 20-ton capacity, and was erected by Allied Contractors, a prominent Omaha firm, at a cost of $14,957.99. Allied received the county's annual bridge contract in 1927 as well as in most other years of that decade. It was built of steel with a concrete floor. A flood on August 12, 1932, damaged the structure and the waterway. Repairs included work on a retaining wall, spillway, and/or dam, some of which apparently occurred upstream to control the course of the creek. The project was undertaken by Allied and completed by September 19 at a cost of $3,908.88. Because the founder of Allied Contractors had also founded Omaha Structural Steel Works, a prominent Nebraska bridge building company, it is possible that the latter firm fabricated this structure.

This is a well-documented example of a bridge type that was typical in Nebraska during the late 1920s. It was erected by Allied Contractors whose president, John W. Towle, was an important figure in Nebraska bridge construction for many decades.

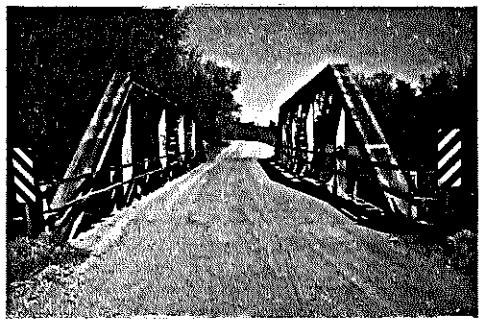
NAME(S) OF STRUCTURE

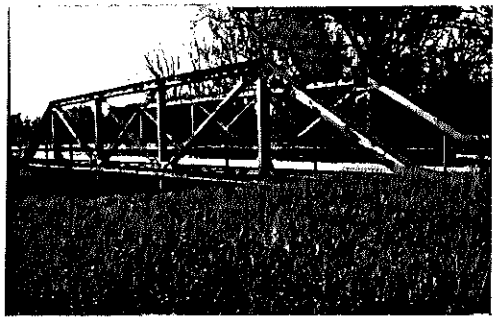
168th Street Bridge [Papillion Creek Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C002813125; bridge files for Bridge Number C002813125 (#230 and #231) located in vault of Douglas County Highway Building, Omaha, Nebraska; Douglas County Commissioners' Records, Book 22, p. 213, 12 April 1927, and p. 486, 28 June 1927, at Douglas County Courthouse, Omaha, Nebraska; field inspection by Robert M. Frame, 27 October 1989.

INVENTORIED BY	AFFILIATION	DATE
Charlene K. Roise	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
108th Street Bridge
NDOR: C002824105

DOUG08

DATE(S) OF CONSTRUCTION
1915

LOCATION
108th Street over unnamed stream; S4/5, T16N, R12E
1.3 miles north of 108th Street/North 36; Douglas County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 33)

CONDITION
fair

OWNER
Douglas County

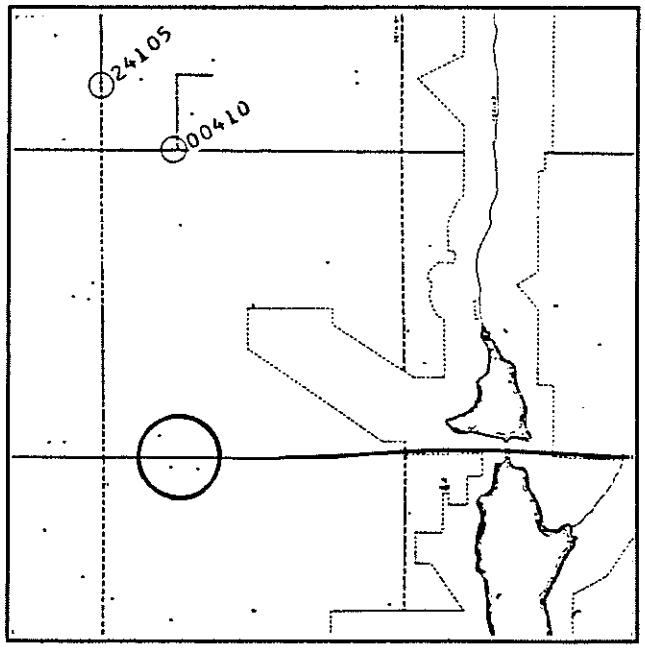
span number:	1	superstructure:	steel stringer
span length:	28.0'	substructure:	concrete/steel pile abutments, back- and wingwalls, with brick fill
total length:	30.0'	floor/decking:	concrete deck over steel stringers
roadway wdt.:	20.0'	other features:	9 I-beam stringers with 2 outside channels; threaded rod bridging between stringers; railing: channels mounted on angle posts

A two-span, 32-foot, wooden bridge was in this location until 1915, when the Douglas County Commissioners voted for the construction of the current structure, a 30-foot I-beam bridge. It was built in October by Omaha Structural Steel Works, which had been awarded the county's annual bridge building contract in 1915 based on bidding from state standard plans. The wooden deck of the 16-foot-wide roadway was supported by seven I-beam stringers and two outside channels. Four channels and ten angles were used for the railings. Since Douglas County adopted state standard bridge plans in 1913, the design of this bridge was presumably based on state plans. The bridge, including concrete abutments and wingwalls, totalled $1,852.92. Allied Contractors, founded in 1920 by John W. Towle (also head of Omaha Structural Steel), was hired in 1923 at a cost of $525.22 to install a 6-inch deep concrete floor on the bridge. Allied was retained again in 1927 to "underpin south end; place cross wall at end north wing closing the ditch with spill at center; and new extension of wing at southeast corner," a project that amounted to $1,773.49. The county spent $1,974.69 in 1934 to widen the bridge to twenty feet, once again under the direction of Allied. Alterations since that time appear to be minimal. Deterioration of the substructure reveals brick fill in addition to the steel piles used for support beneath the concrete sheath. It is unclear if the brick fill was original, and, if so, if it was from the previous bridge or was a fraudulent move by the contractor to gain extra profit by saving on the cost of concrete.

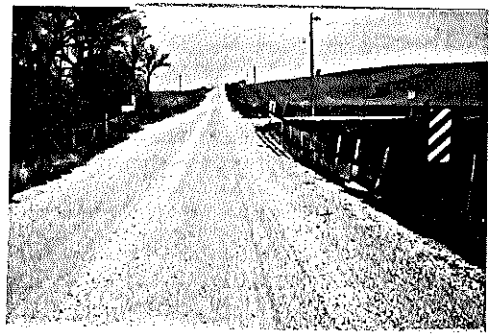
This bridge is typical of the utilitarian steel stringer bridges built throughout Nebraska in the early decades of the twentieth century. It was erected by the Omaha Structural Steel Company, whose president, John W. Towle, was an important figure in Nebraska bridge construction for many decades.It is unusual in that its construction and alterations are well documented. The first bridge of this type known to have been built in Douglas County was ordered by the County Commissioners in 1902.

NAME(S) OF STRUCTURE
108th Street Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C002824105; bridge files for Bridge Number C002824105 (#59), located in vault of Douglas County Highway Building, Omaha, Nebraska; Douglas County Commissioners' Records, Volume 4, p. 132, 2 December 1914, and p. 198, 12 January 1915, at Douglas County Courthouse, Omaha, Nebraska; field inspection by Robert M. Frame, 26 October 1989.

INVENTORIED BY	AFFILIATION	DATE
Charlene K. Roise	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Elkhorn River Bridge
NDOR: SL28B00163

DOUG09

DATE(S) OF CONSTRUCTION
1933-34

LOCATION
L28B, US 275 to US 6 CNLK over the Elkhorn River; S14/23, T15N, R10E
2 miles east of L28B/US 275; Douglas County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 44)

CONDITION
good

OWNER
Nebraska Department of Roads

span number: 1
span length: 202.8'
total length: 476.0'
roadway wdt.: 42.0'

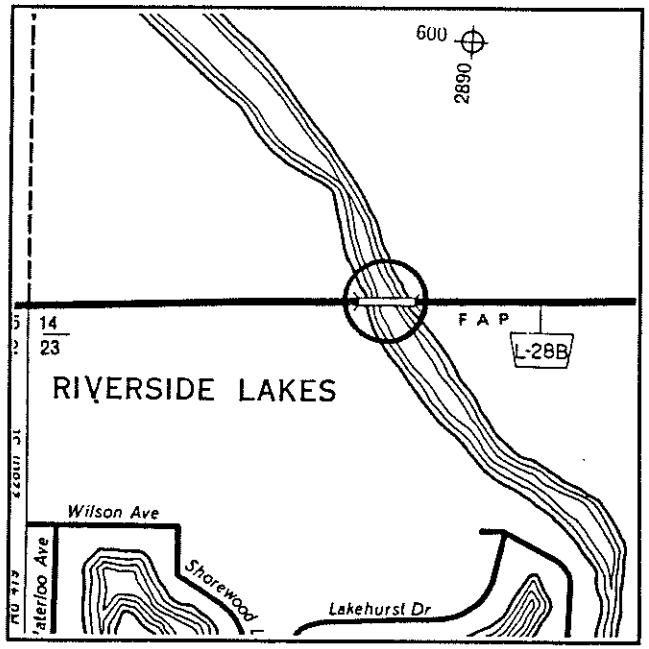
superstructure: steel, riveted Pratt through truss with two riveted Pratt pony approaches, skewed
substructure: concrete abutments, back- and wingwalls; two solid concrete piers
floor/decking: concrete deck and asphalt overlay over steel stringers
other features: upper chord: built-up back-to-back channel beams with cover plate and lacing; lower chord: built-up channels with battens top and bottom; verticals: rolled I-beams; diagonals and counters: rolled I-beams; floor beams: built-up I-beams; railings: angles

The Douglas County Elkhorn River Bridge was built as part of NRS Project 339, one of the federal relief programs sponsored by the federal government to help the nation recover from the Depression. NRS Project 339-B included grading work and one bridge over a 6.3-mile section of road south and east of Waterloo. Estimated cost for the project was $276,172.96. Total cost for the bridge was $134,027.20, or $283.96 per foot - an expensive structure, given that the average cost per foot for bridge construction was $92.53 during the biennium. The 1933-34 **Biennial Report** of the Department of Roads and Irrigation cites this bridge as one of the most notable built during the period. The "unswerving loyalty to the principle of straight alignment required by modern super-highway design" required that the structure be placed at a 44-degree skew relative to the river. Because of this skew and the wide roadway, floor beams were designed with more depth than usual and rather untraditional construction methods were employed. "It was apparent that if the conventional end connections were to be riveted to the trusses and if the deck was to be loaded," the department stated, "the rigidity of the floor beam connections would introduce possible dangerous indeterminate stresses both in the beams themselves and in the trusses. Therefore the long central span was so designed that certain of these floor beam connections were pin connected to the trusses which would allow the truss to deflect freely when the deck was loaded. It was specified that these pin connections only should be made and allowed to function until after the entire concrete deck was placed, after which the connection angle holes would be drilled through the truss metal and the field rivets driven therein, thus completing the permanent attachment of the floor system to the trusses... While this refinement of design might be considered excessive by some, it was insisted upon as a necessary correction of the weakness imposed by alignment causing a skew bridge." (**Biennial Report, 1933-34**, pp. 86-87) Most plans from the State Department of Roads were dated November 1, 1933, and designed by "R.D.L."

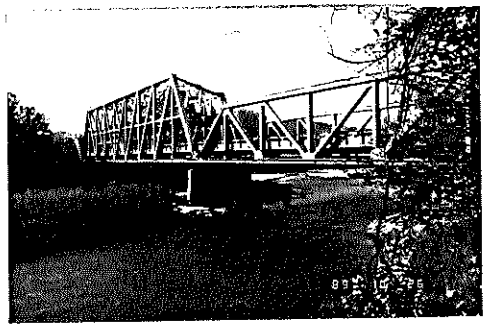
This bridge is important as an example of a significant river crossing built in the 1930s with the aid of federal relief funds. In electing to develop a straight road to conform to newly developed standards for highway construction, a radically skewed design was required which called on unusual construction techniques.

NAME(S) OF STRUCTURE
Elkhorn River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number SL28B00163; Nebraska Department of Roads and Irrigation, **Twentieth Biennial Report, 1933-34**, pp. 81-83, 86-87, 138; Plans for "Proj. 339-B Douglas County" at Bridge Division, Nebraska Department of Roads, Lincoln, Nebraska; field inspection by Robert M. Frame, 26 October 1989.

INVENTORIED BY
Charlene K. Roise

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Dodge Street Subway
NDOR: SL28B00317

DOUG10

DATE(S) OF CONSTRUCTION
1937

USE (ORIGINAL / CURRENT)
highway overpass / highway overpass

LOCATION
U.S. Highway 6 over State Highway 31; S18/19, T15N, R11E
Intersection of L28B, US 275, US 6 and SH 31; Douglas County, Nebraska

RATING potentially NRHP eligible (score: 53)

CONDITION
good

OWNER
Nebraska Department of Roads

span number: 3
span length: 35.0'
total length: 94.0'
roadway wdt.: 44.0'

superstructure: concrete rigid frame
substructure: concrete abutments, back- and wingwalls; piers are solid, part of rigid frame
floor/decking: concrete and asphalt
other features: spans have flat arches

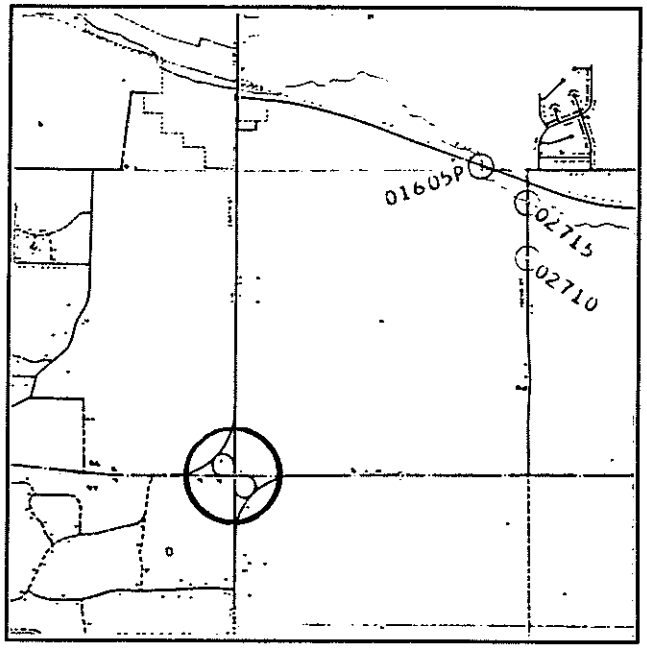
In its 1937-38 **Biennial Report**, the Department of Roads stated that "the best example of the highway subway is the so-called Dodge-Street Subway where the grade of Highway No. 31 was depressed and made to pass under the four-lane Dodge-street artery. This particular job was done by State forces with the assistance of WPA labor, all under State supervision." The report contains a photograph of the subway with the caption: "This Structure was built by State forces without interrupting traffic on Dodge Street." Drawings for the Dodge Street Subway were completed by the Department of Roads on June 11, 1937, then revised July 7 and August 19. This concrete rigid frame structure was one of nine grade separations erected during the biennium, three of which were subways. Significantly, it was one of the first two rural highway grade separations built in the state. (The other was at Center Street Road, also in Douglas County.) Estimated cost for the structure was $20,964.95, or $225.43 per foot. The overpass and semi-cloverleaf were part of project #183, which had a price tag of $102,368.60 and included paving five miles of Highway 31 from a point north of Gretna to "Highway No. 30 Alternate" (Dodge Road) as well as construction of two structures. It was subsidized by one of the federal relief programs developed in the 1930s to improve the infrastructure and, as importantly, to provide work for the many unemployed.

This bridge is important as one of the first two rural grade separations in Nebraska, as a product of the federally assisted road programs of the 1930s, and as a relatively rare example of the concrete rigid-frame design.

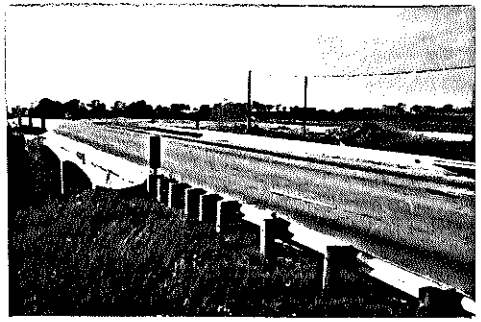
NAME(S) OF STRUCTURE

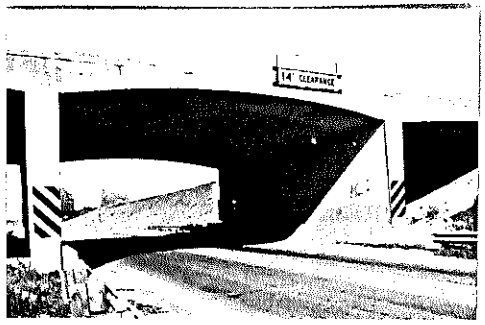
Dodge Street Subway

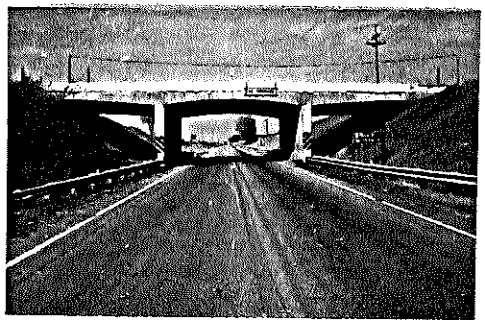
PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP







SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number SL28B00317; Nebraska Department of Roads and Irrigation, **Twenty-Second Biennial Report, 1937-38**, pp. 42-43, 69, 74, 146; plans for "Project 183. 92'-0" Rigid Frame Grade Separation under Dodge St." in Bridge Division, Nebraska Department of Roads, Lincoln, Nebraska; field inspection by Robert M. Frame, 26 October 1989.

INVENTORIED BY

Charlene K. Roise

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Saddle Creek Underpass
NDOR: S00637025

DOUG11

DATE(S) OF CONSTRUCTION
1934

LOCATION
U.S. Highway 6 (Dodge Street) over Saddle Creek Road; S19, T15N, R13E
Omaha; Douglas County, Nebraska

USE (ORIGINAL / CURRENT)
highway underpass / highway underpass

RATING potentially NRHP eligible (score: 42)

CONDITION
good

OWNER
Nebraska Department of Roads

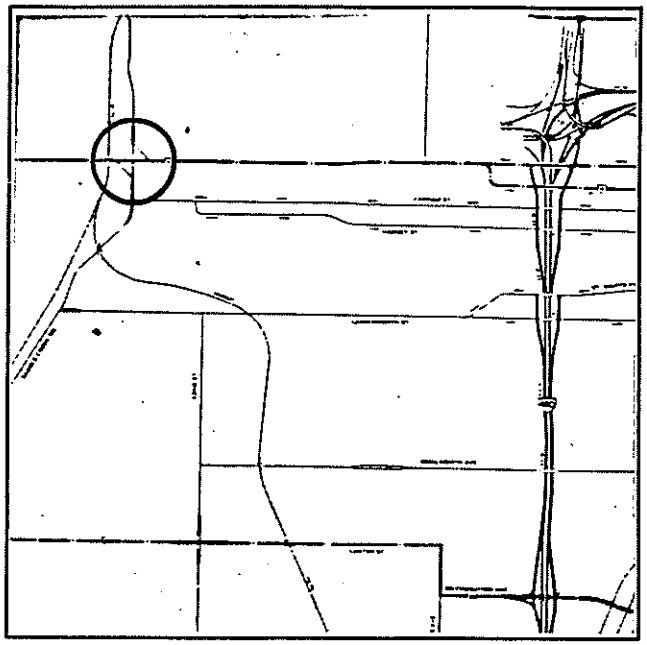
span number:	1	superstructure:	concrete rigid frame with stone facing
span length:	50.0'	substructure:	concrete abutments, back- and wingwalls
total length:	72.0'	floor/decking:	brick and concrete with asphalt overlay
roadway wdt.:	56.0'	other features:	6-foot sidewalks both sides; railing: stone-faced concrete with stone coping

This bridge and cloverleaf were built as part of a larger federal aid project described in the Department of Roads' 1933-34 **Biennial Report**: "The Dodge Street project... consisted of widening the street from Thirtieth west to the city limits, making a four traffic-lane street between those points. Included in this project, is a complete, modern street light system, and[sic] interlocking traffic control signal system, two pedestrian subways, and a grade separation of Dodge Street and Saddle Creek Boulevard." Dodge Street carried street car tracks as well. The report added that "of minor interest in this work is the stone facing of the grade separation and the pedestrian subways. The stone used was old natural stone curbing taken up during construction. The stone was cut and cleaned by CWA workers. Another item of interest is the fact that much of the street is surfaced with the original brick taken off the old pavement." Cost of the project was over $660,000. Of that amount, about $35,000 went to construction of the Saddle Creek Underpass. Over 1,175 cubic yards of dirt were excavated to lower Saddle Creek Road sufficiently for the underpass. About 4,160 square feet of stone facing was required for the bridge. Placement of the stone was carefully detailed in plans prepared by the Department of Roads, dated December 10, 1933. The **Biennial Report** described the distinctive feature of rigid frame construction, a relatively new design: "The slab or deck takes the form of a very flat arch with a comparatively thin slab at the crown." The report added that "this feature promotes economy and, being of a curved arched shape, it naturally lends itself to a beautifying architectural treatment."

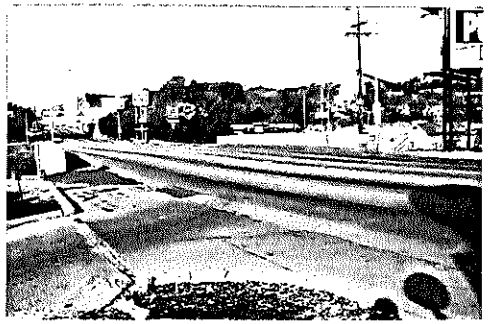
This bridge is an excellent example of the type of structure produced under federal relief projects in the 1930s. The rising importance of aesthetics in highway design is reflected in the reuse of stone curbing for bridge facing and in the choice of the rigid frame design, chosen because of visual as well as functional concerns.

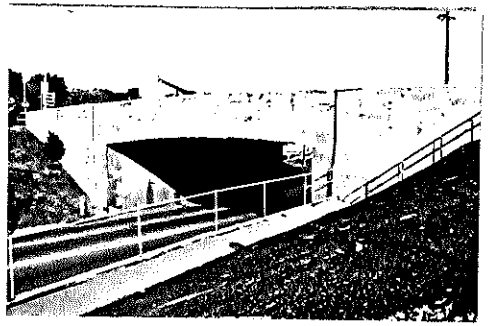
NAME(S) OF STRUCTURE
Saddle Creek Underpass

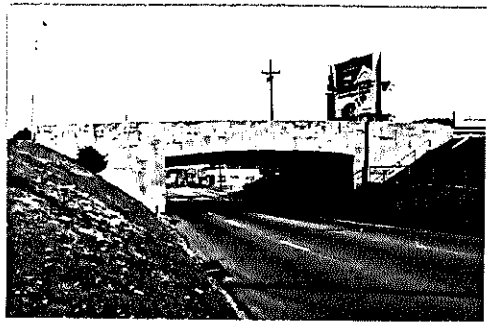
PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP







SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number S00637025; Nebraska Department of Roads and Irrigation, **Twentieth Biennial Report, 1933-34**, pp. 30, 81, 84; plans for "Grade Separation, Dodge Street and Saddle Creek Road," at Bridge Division, Nebraska Department of Roads, Lincoln, Nebraska; field inspection by Robert M. Frame, 26 October 1989.

INVENTORIED BY
Charlene K. Roise

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Elkhorn River Bridge
NDOR: S03600658

DOUG12

DATE(S) OF CONSTRUCTION
1944-45

LOCATION
State Highway 36 over the Elkhorn River; S4/9, T16N, R10E
2 miles west of Elk City; Douglas County, Nebraska

USE (ORIGINAL / CURRENT)
highway bridge / highway bridge

RATING not yet NRHP eligible (score: 28)

CONDITION
excellent

OWNER
Nebraska Department of Roads

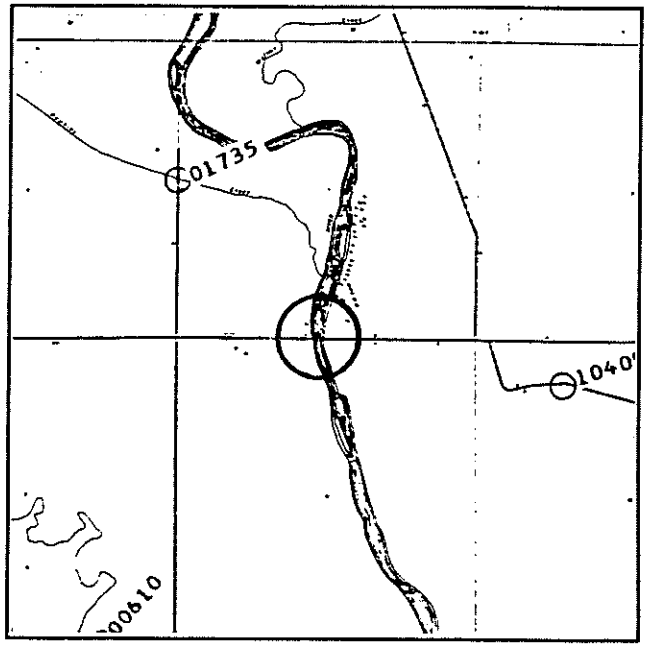
span number:	3	superstructure:	steel, cantilevered, deck plate-girder
span length:	130.0';110.0'	substructure:	concrete abutments and slope protection; solid concrete piers
total length:	510.0'	floor/decking:	concrete deck over steel stringers
roadway wdt.:	26.0'	other features:	sides of bridge cantilevered beyond the two deck plate-girders; transverse bracing between girders made up of angles and plates; lateral bracing: back-to-back angles; railings: angle posts and one rail; stepped concrete curbs

This 510-foot-long, deck plate-girder bridge, built as Project WER 2-C(1), was pictured in the 1945-46 **Biennial Report** of the Department of Roads and described as a "five span cantilever type structure. Span lengths vary from 80 to 130 feet. Two lines of supporting girders carry a 10-inch concrete deck. The construction cost was $136,116.80." At another point in the **Report**, however, the District 2 engineer remarked that "bridges over the Elkhorn at Nickerson and Elk City have been under construction for over a year, but due to shortage of materials neither structure has been completed." Most materials required for bridge construction were solely dedicated to military use during World War II, resulting in a virtual cessation of bridge building during this period. Even years after the end of hostilities, materials were difficult to obtain. The Elkhorn River Bridge may have been given priority because it carried Highway 8 (now Highway 36), which had been declared a military highway. The bridge replaced a temporary structure erected after flooding in 1944 destroyed an earlier bridge.

Because World War II interrupted bridge construction programs, this was one of the few bridges built during this period. Although this bridge is not yet fifty years old, and thus is not eligible for listing on the National Register, its status should be reviewed in 1994.

NAME(S) OF STRUCTURE
Elkhorn River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number S03600658; Nebraska Department of Roads and Irrigation, **Twenty-Sixth Biennial Report, 1945-46**, vol. 1, pp. 67, 171; plans for "510'-0" Multiple Span Bridge" at Bridge Division, Department of Roads, Lincoln, Nebraska; field inspection by Demian J. Hess, 1 May 1990

INVENTORIED BY
Charlene K. Roise

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
South Omaha Bridge [Missouri River Bridge] DOUG13
NDOR: S27519041

DATE(S) OF CONSTRUCTION
1933-35

LOCATION
US Hwy 275, State Hwy 92 over the Missouri River; S2/3, T14N, R13E
Omaha/Council Bluffs; Douglas County, Nebraska

USE (ORIGINAL / CURRENT)
highway bridge / highway bridge

RATING
NRHP eligible (score: 73)

CONDITION
very good

OWNER
Nebraska Department of Roads

span number: 2
span length: 525.0'
total length: 2126.0'
roadway wdt.: 22.2'

superstructure: silicon steel, 2-span, continuous Warren through truss, 1,050-feet long; west approach: two concrete girder spans totalling about 107 feet and 1,490 feet of Warren deck trusses ranging from 111 to 159 feet; east approach: thirty 35-foot steel beam spans, two 100-foot girder spans, and three, 160-foot, Warren deck trusses

substructure: solid and open concrete piers with streamlined detailing support main spans; steel bents and towers under west deck trusses; concrete piers and piles under east approach spans

floor/decking: concrete deck over steel stringers

other features: continuous truss span: many members are 18-inch ship-channel sections; deck truss spans: rolled sections for all web systems, other members are built-up I-beams (4 angles and a web section); stringer spans: 4 stringers per span, with floor slab cantilevered beyond outer stringers; railings: two Z-bars connected by bar lacing (except west end); toll plaza (no longer functioning as such) on west side includes widened roadway, concrete balustrades, pylons; plaques on pylons of west approach plaza: "South Omaha Bridge -- Federal Emergency Administration of Public Works -- Project No. 22;" "City of Omaha South Omaha Bridge Project 1933-35 -- Designed and Supervised by Ash-Howard-Needles & Tammen, Consulting Engineers, R.N. Bergendoff, Res. Engr. -- General Contractors Kansas City Bridge Company, E.A. Wickham & Company, Council Bluffs Construction Co."; "City of Omaha... Constructed under direction of Omaha Bridge Commission" (lists mayor, commissioners, attorneys, manager); "To those whose tolls made it possible and to all who used it this bridge is dedicated. Opened to traffic, January 18, 1936, freed of tolls, September 25, 1947" (lists mayors, bridge commission, attorneys, manager)

Designer: Ash, Howard, Needles, & Tammen (of Kansas City, Mo., with R.N. Bergendoff, Resident Engineer)
Fabricator: Kansas City Bridge Company, Kansas City MO
Contractor: Kansas City Bridge Company, superstructure and substructure; E.A. Wickham & Company (Council Bluffs, Iowa), 5.5 mile highway approach; Council Bluffs Construction Company

South Omaha Bridge [Missouri River Bridge]

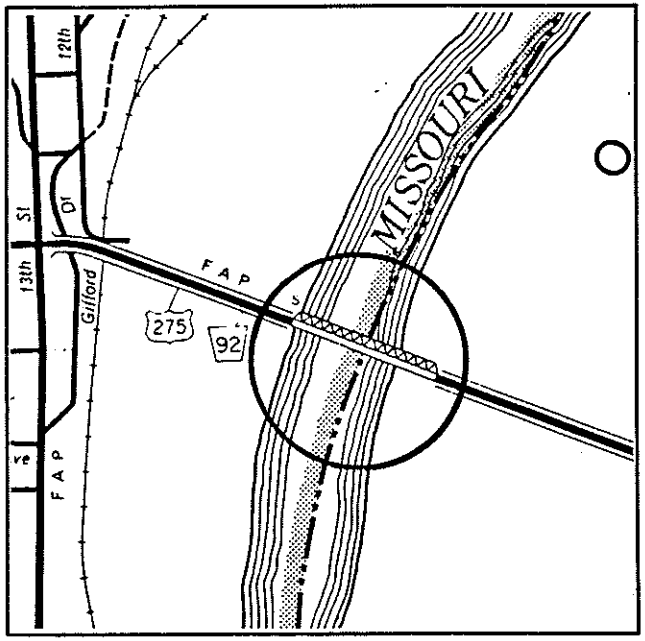
Omaha's Douglas Street Bridge, which required motorists to traverse the congestion of downtown Omaha and Council Bluffs, was the only Missouri River crossing for many miles available for vehicular traffic. Frustrated drivers agitated for another bridge. In 1930, a proposed bond issue for $2,000,000 to build a bridge in South Omaha was defeated, but it passed the following year. The city subsequently had trouble selling the bonds privately and, in 1933, formed the Omaha Bridge Commission to appeal to the PWA for funding. Later that year, the PWA approved a $1,650,000 loan and grant, and the engineers, who had been retained in 1931, finally began design work. They originally planned a series of seven, 400-foot through trusses with approach viaducts totaling about 1,900 feet in length. All trusses cleared the maximum height required for river navigation. This was necessary because the War Department planned to alter the Missouri River's course, since the channel split near Omaha causing navigation problems and eroding valuable Iowa farmland. Since the new location was not yet determined, the Department insisted that the proposed bridge design allow all options. Before construction of the bridge began, however, the War Department decided on the river's new course. Engineers then developed the bridge design that was actually built, in which only the two central continuous truss spans clear the navigation channel. About $400,000 in construction costs were saved by the design change. A $1,035,468 contract for construction of the superstructure and substructure was awarded to the Kansas City Bridge Company in the spring of 1934, and E.A. Wickham and Company received a contract for $245,000 to complete grading on the 5.5 mile approach road in Iowa. Because the path of the river was being changed, work on bridge piers was coordinated with the War Department's plans, enabling construction of all pier foundations on dry land. A concrete plant was established near the site, and sand and gravel for aggregate was secured from the Platte River. Superstructure construction began at the Omaha end and worked east. All connections were riveted. The bridge was open to traffic on January 18, 1936, with user tolls dedicated to paying off the construction loan. This was accomplished by September 25, 1947, and the bridge has functioned as a free crossing since that time.

This bridge is significant as a large-scale example of cantilevered construction. It also displays the importance of the PWA loan/grant program in making possible much needed public improvements. The bridge provided an important, direct link between the livestock producing regions of Iowa and the South Omaha Stockyards. The monumental treatment given to the west entrance shows the growing emphasis on aesthetics during this period.

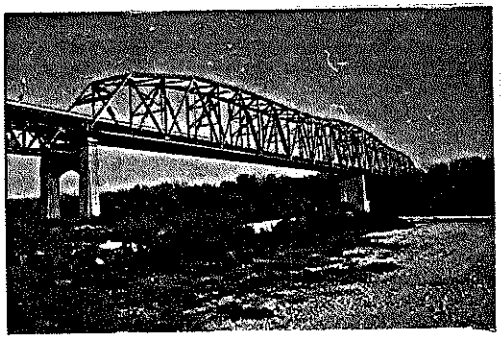
NAME(S) OF STRUCTURE

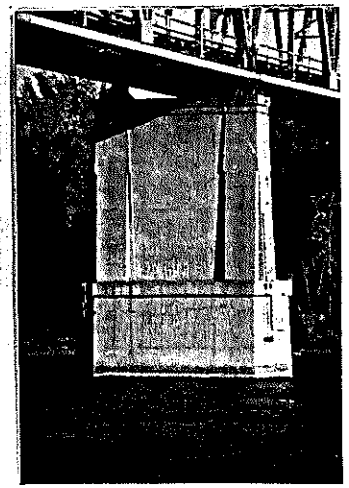
South Omaha Bridge [Missouri River Bridge]

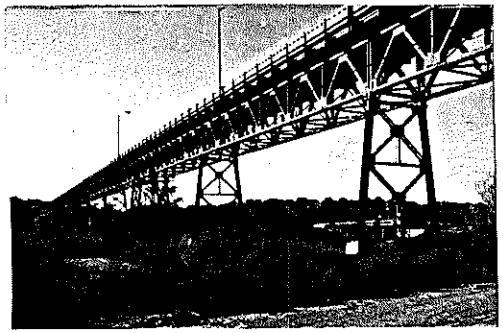
PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP







SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number S27519041; "Building a Bridge for a Future River Channel," **Engineering News-Record** 114 (23 May 1935): 727-32; field inspection by Robert M. Frame, 25 October 1989.

INVENTORIED BY

Charlene K. Roise

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Main Street Bridge
NDOR: U082501805P

DOUG14

DATE(S) OF CONSTRUCTION
1915

LOCATION
Main Street over West Papillion Creek; S12, T15N, R10E
Elkhorn; Douglas County, Nebraska

USE (ORIGINAL / CURRENT)
city street bridge / city street bridge

RATING potentially NRHP eligible (score: 43)

CONDITION
good

OWNER
City of Omaha

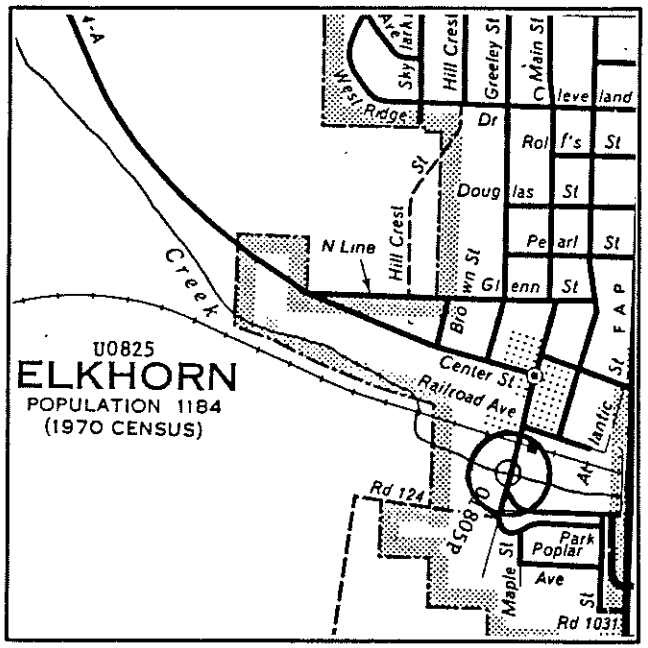
span number:	1	superstructure:	steel stringer
span length:	28.0'	substructure:	concrete abutments, back- and wingwalls
total length:	30.0'	floor/decking:	concrete deck over steel stringers
roadway wdt.:	20.2'	other features:	10 stringers plus outside channels; sidewalk on east side only, concrete slab extends beyond stringers; railing: channels on angles

On September 25, 1915, the Douglas County Commissioners requested that Omaha Structural Steel Works, which had been awarded the county's bridge contract that year, build at this site a 30-foot, I-beam bridge, 20 feet wide with a four-foot sidewalk. The bridge replaced a wood pile structure. Construction began on November 23. Since the county had adopted state standard bridge plans in 1913, the structure's design was presumably based on state plans. Plans contained in the file for Bridge #388 (later renumbered U082501805P) show the bridge essentially as it now stands. Eight-inch I-beams and 8-inch H-piling reinforced the concrete back- and wingwalls. The structure was built with a wood floor. On June 29, 1920, the county commissioners passed the following measure: "Whereas L.E. Adams, County Supervisor, has recommended that a concrete flooring be laid on Bridge No. 388, located on the Lincoln Highway just south of U.P. Railway Tracks, this bridge being a 24 ft. x 30 ft. I Beam structure with wooden floor, and was built in the year 1915, therefore be it resolved... to have this concrete flooring laid... to conform with the rest of the bridges on the Lincoln Highway." Chris Hansen was foreman for the work, with Omaha Structural Steel Works providing reinforcing and C.C. Holling supplying lumber. Total cost for the work was $677.35.

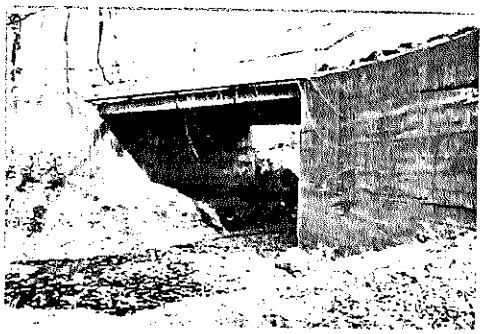
The Lincoln Highway was the country's first transcontinental automobile road. It was organized by the Lincoln Highway Association, founded in 1912 by Carl Graham Fisher, an Indiana real estate developer who built the Indianapolis Speedway several years before. Fisher claimed that "the highways of America are built chiefly of politics, whereas the proper material is crushed rock or concrete." He proposed a road stretching from Jersey City, New Jersey, to San Francisco, named in honor of the nation's sixteenth president. The section through Nebraska, which was completed in the early 1920s, originally passed through Omaha and proceeded west through the state. It was later designated U.S. Highway 30, and its eastern end rerouted north through Blair. The Elkhorn section was presumably bypassed at this time as well. Paving of a section west of North Platte in 1935 made the Lincoln Highway North America's first transcontinental paved road.This bridge is a well-preserved and well-documented example of a utilitarian bridge design widely used throughout Nebraska during the first decades of the 20th century. It gains added significance by its association with the Lincoln Highway.

NAME(S) OF STRUCTURE
Main Street Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number U082501805P; Douglas County Commissioners' Records, Vol. 4, p. 571, 25 September 1915, and Book 9, p. 407, 29 June 1920, at Douglas County Courthouse, Omaha, Nebraska; bridge files for Bridge Number U082501805P (#388), located in vault of Douglas County Highway Building, Omaha, Nebraska; field inspection by Robert M. Frame, 26 October 1989. Information about the Lincoln Highway in George E. Koster, "A Story of Highway Development in Nebraska," paper, 1986, p. 8; "Lincoln Highway Registration Form," nomination to the National Register of Historic Places, available at Nebraska State Historical Society, Lincoln; Nebraska Department of Public Works, **Monthly Report**, September 1921, p. 7, and July 1922, p. 10.

INVENTORIED BY
Charlene K. Roise

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Dahlman Avenue Overpass [31st Street Overpass] DOUG15
NDOR: U1825E5315

DATE(S) OF CONSTRUCTION
1907-8

LOCATION
Dahlman Avenue over the Union Pacific Railroad; S33, T15N, R13E
Omaha; Douglas County, Nebraska

USE (ORIGINAL / CURRENT)
city street overpass / city street overpass

RATING potentially NRHP eligible (score: 50)

CONDITION
very good

OWNER
Union Pacific Railroad

span number:	1	superstructure:	steel deck girder with steel deck-girder approach spans
span length:	59.8'	substructure:	concrete abutments and backwalls; built-up steel piers on concrete bases (skewed)
total length:	133.0'	floor/decking:	wood plank deck bolted to stringers
roadway wdt.:	24.6'	other features:	5 stringers run between 2 exterior girders; sidewalk on both sides cantilevered on brackets; lattice railing with decorative end posts; floor beams riveted to girders with gusset plates on flange of girder; stringers riveted to floor beams with angles; substructure is skewed, but superstructure is not

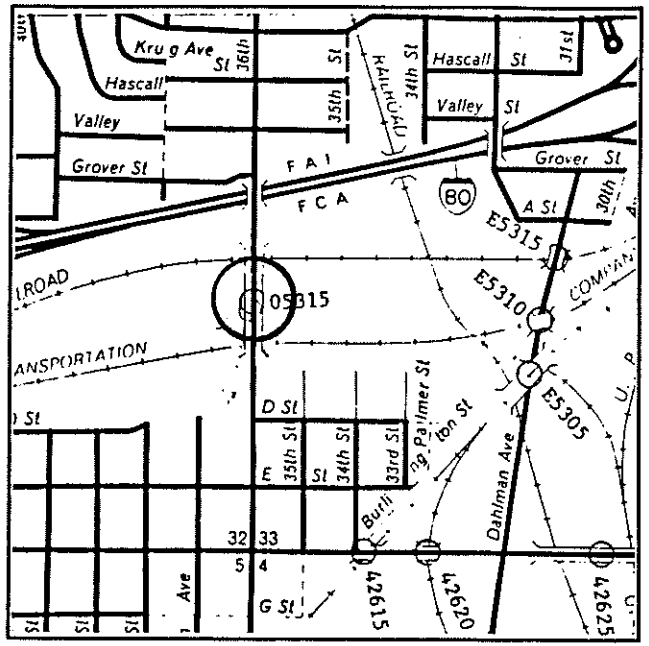
An erection diagram for the "Union Pacific Railroad Company Highway Bridge over East Boulevard, South Omaha" was drawn 16 August 1907, checked that October, and revised October 1908. The date "1907" is incised in concrete at northeast and southwest pier footings, indicating that at least the substructure was erected in that year. Plans show a three-span, through plate-girder bridge with a 24-foot roadway. Six-foot sidewalks are supported by cantilevered brackets on both sides. The central plate girder, which measures 59'9" long, has a greater web depth than the approaches, each of which span 36 feet. The viaduct was apparently built by the American Bridge Company with steel fabricated at Lassig Bridge and Iron Works, Chicago. Lassig was one of the companies merged by J.P. Morgan in 1900 to create American Bridge. The superstructure has a straight orientation, with floor beams running perpendicular to the roadway. The substructure, however, is skewed to allow adequate clearance for two tracks below, plus provision for addition of a third track. This is one of several viaducts built in 1907-8 because of a new route developed by the railroads.

Omaha owes its early prosperity and growth to its key location on the transcontinental railroad. This viaduct is an exceptionally well-preserved example of the grade separations designed and built by the railroads in the early 20th century.

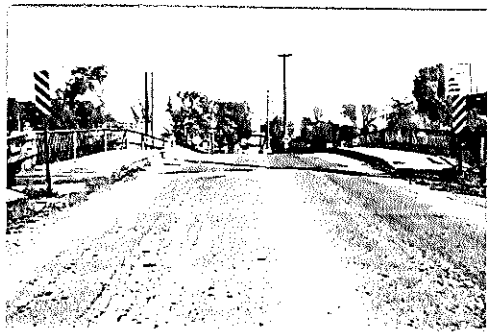
NAME(S) OF STRUCTURE

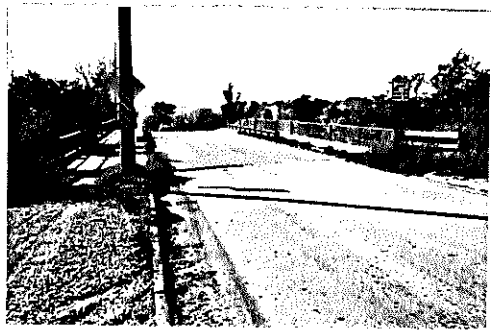
Dahlman Avenue Overpass [31st Street Overpass, East Boulevard Overpass]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number U1825E5315; Entries for 31st Street in Bridge Book for Nebraska Division Main Line, Union Pacific Railroad, Omaha, Nebraska; "Plan for South Omaha and Western R.R. Co. Highway Bridge over East Boulevard, South Omaha Nebraska," and "Erection Diagram, Union Pacific Railroad Co. Highway Bridge over East Boulevard, South Omaha," at Bridge Department, Union Pacific Railroad, Omaha, Nebraska; phone interview with Paul Welsch, Senior Structures Designer, Union Pacific Railroad, 7 January 1991; Victor C. Darnell, **American Bridge-Building Companies** (Washington, DC: Society for Industrial Archeology, 1984), p. 85; field inspection by Robert M. Frame, 25 October 1989.

INVENTORIED BY

Charlene K. Roise

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
O Street Viaduct
NDOR: U1825I2605

DOUG16

DATE(S) OF CONSTRUCTION
ca.1885; moved to this site in 1904

LOCATION
O Street over the Union Pacific Railroad; S4, T14N, R13E
Omaha; Douglas County, Nebraska

USE (ORIGINAL / CURRENT)
roadway viaduct / roadway viaduct

RATING potentially NRHP eligible (score: 46)

CONDITION
very good

OWNER
Union Pacific Railroad

span number: 3
span length: 247.0'
total length: 510.0'
roadway wdt.: 20.0'

superstructure: steel (or iron) pin-connected Whipple through truss (skewed) with steel, riveted Pratt through truss and concrete slab approach spans (west) and steel deck girder with timber stringer approach spans (east)

substructure: solid concrete piers under double-intersection span; timber pile, concrete pier, and built-up steel piers under others

floor/decking: timber over timber and I-beam stringers; concrete

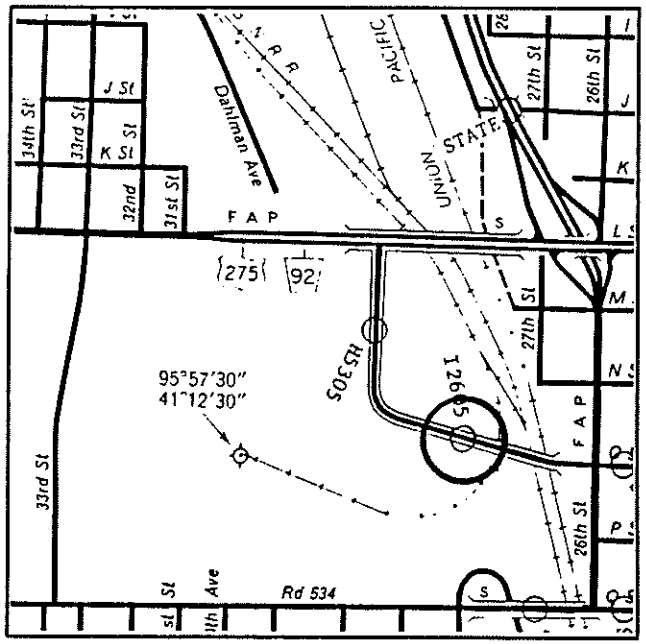
other features: through trusses - upper chord: built-up channel beams with cover plate and lacing; lower chord: punched rectangular eye-bar; verticals: 4 angles with plate, 2 channels with lacing; diagonals: rectangular punched eye-bars; counters: looped rods; portal and sway bracing: angles; floor beams: built-up I-beams; bottom laterals: angles; railings: lattice, wood planks; sidewalks both sides, cantilevered out on solid brackets.

A plaque on end post of the main truss reads: "Constructed by the Union Pacific R.R. Co. and the Union Stock Yards Co. 1904." The date "1904" is also incised in the concrete pier. A Union Pacific erection diagram dating from 1904 for the 247-foot truss is labeled "2nd Hand Trusses," indicating that at least the Whipple span came from another site. Unfortunately, there is no record of the span's original location. Whipple trusses were very popular during the 1880s for railroad bridges across the Missouri River. Many of these structures were designed by prominent engineer George S. Morison. In 1885, the Union Pacific hired Morison to plan a bridge across the Missouri River between Omaha and Council Bluffs. The structure included four, 246-foot Whipple trusses. Since the Missouri River bridge stood until 1916, it could not have been the source of the O Street span, but it does justify the assumption that the Whipple truss dates from the 1880s. The west approach of the O Street Viaduct originally consisted of 25 stringer spans on cedar pile bents rising from a concrete ramp at ground level to the elevation of the through trusses. This approach was at some point replaced by the existing concrete slab approach, probably in the mid-1920s in conjunction with development of a viaduct for unloading cattle and construction of the new Livestock Exchange Building. The eastern girder and stringer approach appears to be unaltered. The Whipple truss was used primarily for major river crossings. Few survive, enhancing the importance of the O Street Viaduct. Since trusses are mobile by design, relocation of the Whipple span does not harm its integrity. The structure is also important for its association with the Union Stockyards, established in the mid-1880s by prominent Omaha businessmen. The stockyards and associated packing plants quickly grew into a major industry: by 1890, "meat products counted for more than one-fourth of the state's entire manufactured products," according to historian James C. Olson. The O Street Viaduct provided the only direct eastern access over the railroad tracks to the stockyards.

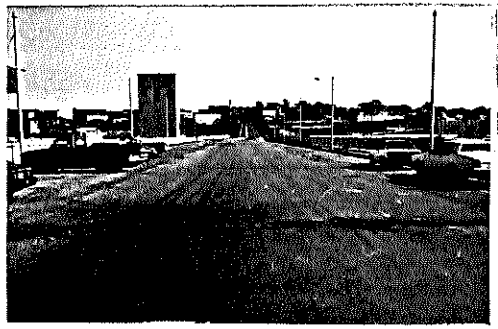
NAME(S) OF STRUCTURE

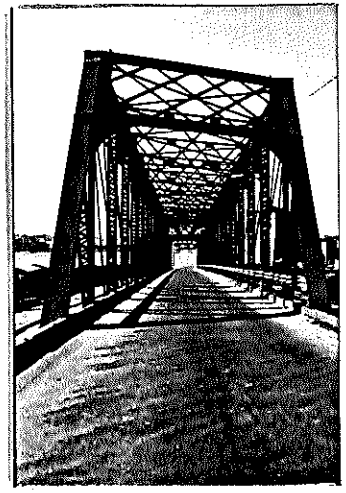
O Street Viaduct

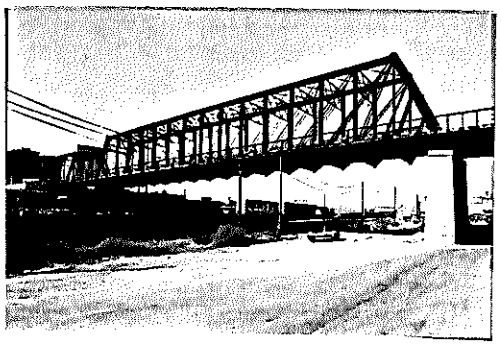
PHOTOS AND SKETCH MAP OF LOCATION

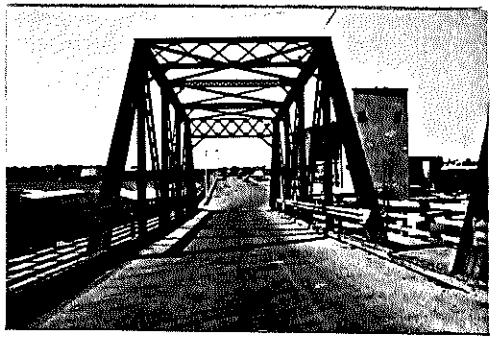


LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP









SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number U1825I2605; plans for the O Street Viaduct at the Bridge Department, Union Pacific Railroad, Omaha, Nebraska; phone interview with Paul Welsch, Senior Structures Designer, Union Pacific Railroad, 7 January 1991; James C. Olson, **History of Nebraska** (Lincoln: University of Nebraska Press, 1966), p. 201; Omaha Landmarks Heritage Preservation Commission, **A Comprehensive Program for Historic Preservation in Omaha** (Omaha: Klopp Printing Company, 1980), p. 68; field inspection by Robert M. Frame, 25 October 1989.

INVENTORIED BY

Charlene K. Roise

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Locust Street Viaduct
NDOR: U1825J1605

DOUG17

DATE(S) OF CONSTRUCTION
1915-16

LOCATION
Locust Street over tracks of several railroads; S10, T15N, R13E
Omaha; Douglas County, Nebraska

USE (ORIGINAL / CURRENT)
city street viaduct / city street viaduct (closed)

RATING determined NRHP not eligible (score: 38)

CONDITION
damaged by train derailment

OWNER
railroad

span number:	30	superstructure:	three steel, through plate-girder spans with I-beam stringer approach spans
span length:	100.5'	substructure:	straight concrete abutments; built-up steel piers
total length:	1440.0'	floor/decking:	concrete deck over I-beam stringers
roadway wdt.:	27.5'	other features:	spans from east to west: eight 30-foot stringers; one 34-foot stringer; one 76-foot through plate-girder; two 27.3-foot stringers; one 35-foot stringer; eight 30.3-foot stringers; one 100.5-foot through plate-girder; one 70-foot through plate-girder; one 31-foot stringer; six 30-foot stringers. Sidewalks both sides on cantilevered brackets.

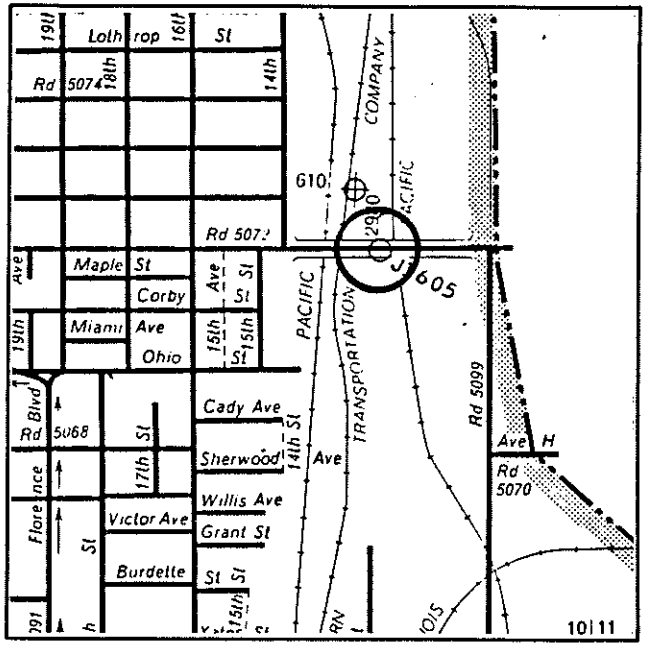
The need to separate rail and vehicular traffic was first considered by the Omaha City Council in 1874. Several viaducts had been constructed by the 1890s. Discussion of a viaduct at Locust Street began in 1898, but nothing came of it for a number of years. On March 9, 1909, City Engineer Andrew Rosewater presented plans for the structure, but his death once again delayed the project. Rosewater's successor, George W. Craig, modified the plans and specifications and submitted them to the City Council and to the railroad companies. Valuation of property to be taken for the project began in 1910-11, but work on the project continued to move slowly. The City Council approved plans again revised by the City Engineer in January 1915. Construction was apparently the responsibility of the Missouri Pacific Railway Company, since a representative from that firm notified the City Council that the structure was finished in August 1916. Within a year, however, the viaduct was damaged by fire. Repairs by the Toledo Bridge and Crane Company, under contract with the Missouri Pacific Railroad, were delayed because most steel was being directed to the war effort. Eventually the viaduct was reopened. It served traffic for many decades until a train derailment damaged about 250 feet of the structure on March 30, 1990, leading to its closure.

The Locust Street Viaduct is one of a series of grade separations necessitated by the large number of railroad tracks dominating the heart of Omaha. Earlier and more prominent viaducts, however, have greater historical significance. The structure does not display unusual engineering, since girder spans in excess of 120 feet were produced by the mid-1910s. The integrity of the viaduct has been greatly damaged by the recent train derailment.

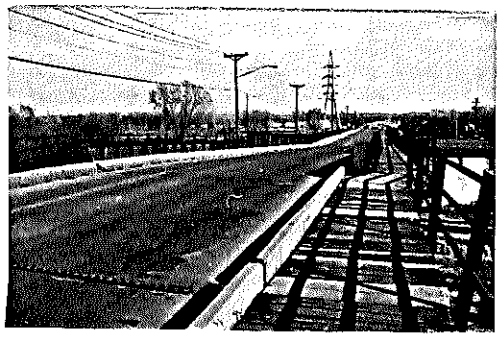
NAME(S) OF STRUCTURE

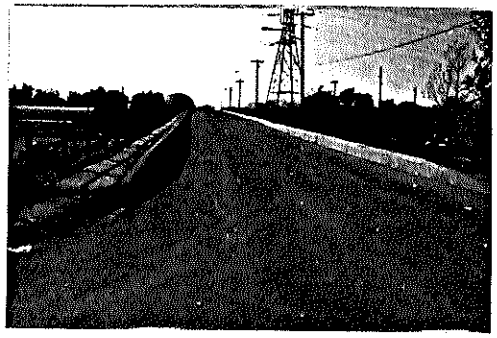
Locust Street Viaduct

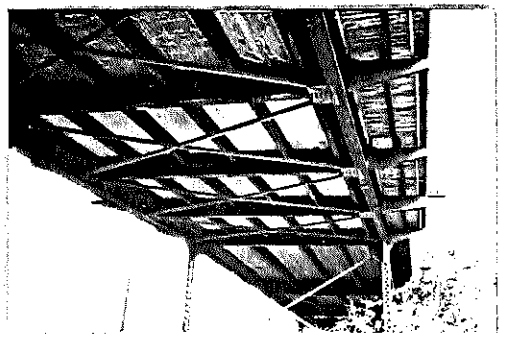
PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP







SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number U1825J1605; telephone conversation with Larry Rudolph, Union Pacific Railroad, Omaha, 4 June 1990; Omaha City Council Minutes, 19 May 1874 (Vol 1. p. 215, #72), 16 August 1898 (Vol. A-40, p. 228, #3772), 3 July 1906 (Vol. A-64, p. 370, #2174), 9 March 1909 (Vol. A-74, pp. 331-32), 30 November 1909 (Vol. A-77, pp. 301-2, #5867), 3 May 1910 (Vol. A-78, p. 47, #2245), 209 September 1910 (Vol. A-80, p. 406, #4842), 27 September 1910 (Vol. A-80, pp. 459-60, #4967), 8 November 1910 (Vol. A-81, pp. 8-9, #5611-12), 14 January 1915 (Vol. A-96, p. 229, #239-40), 26 January 1915 (Vol. A-96, p. 292, #406), 22 August 1916 (Vol. A-103, p. 514, #5369), 24 July 1917 (Vol. A-107, p. 199, #4625); field inspection by Robert M. Frame, 24 October 1989.

INVENTORIED BY

Charlene K. Roise

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
16th Street Viaduct DOUG18
NDOR: U1825J5505

DATE(S) OF CONSTRUCTION
1900

LOCATION
16th Street over Union Pacific/Burlington Northern Railroads; S22, T15N, R13E
Omaha; Douglas County, Nebraska

USE (ORIGINAL / CURRENT)
city street viaduct / city street viaduct

RATING potentially NRHP eligible (score: 54)

CONDITION
excellent

OWNER
railroad

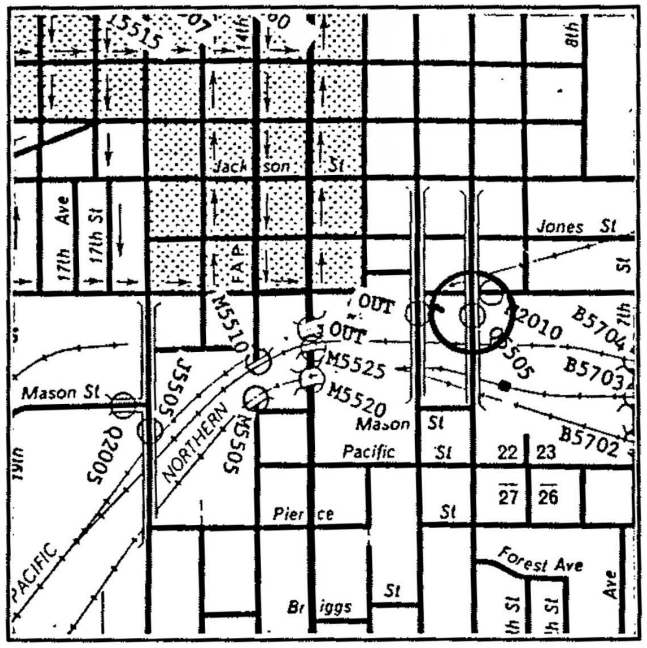
span number:	30	superstructure:	steel, deck plate girder
span length:	85.0'	substructure:	built-up steel piers, with footings encased in concrete or stone; piers skewed at tracks
total length:	1431.0'	floor/decking:	wood, asphalt deck over steel stringers
roadway wdt.:	35.5'	other features:	lattice cross-bracing between girders below floor beams, especially on longer spans; sidewalks both sides; lattice railing; builder's plate: **Built by Lassig Bridge & Iron, Chicago, Illinois 1900.** Mason Street Viaduct (DOUG21) intersects with west side of 16th Street Viaduct

A viaduct was first erected on 16th Street in 1886. Within a decade, the combination Howe truss structure had deteriorated, leading to calls for construction of a new, more permanent viaduct. The project was delayed to avoid disruption of traffic during the 1898 Trans-Mississippi Exposition, but in August 1898, the Omaha City Council directed the city engineer to determine "the size, width and material of such a viaduct as is necessary." The railroads apparently agreed to build the new viaduct and to forward plans for it to the city engineer. On June 6, 1899, Horace G. Burt, president of the Union Pacific Railroad, and G.W. Holdrege, general manager of the Burlington and Missouri River Railroad, submitted a proposal regarding several crossings to the city. Among other provisions, the proposal called on the city to pay for the removal of the existing structure, after which the railroads would build a new viaduct using their own design. After some negotiation, the parties reached agreement in July on construction of viaducts at 16th, 24th and Boulevard Streets and a subway at Bancroft Street, "all of which are absolutely necessary to the business and pleasure interests of the people of the City of Omaha." Council minutes added that "it is self evident that there should be no delay of any kind in the construction of the Sixteenth Street viaduct, which should be finished at once as per plans already adopted." Meanwhile, on June 6 the city had awarded a contract for demolition of the old viaduct to the Wrought Iron Bridge Company for $550. According to Union Pacific records from 1900, the 1399-foot structure was "opened for public travel Sunday July 15th." The records continue: "Entire structure built by U.P. Co. Cost of same apportioned as follows. Om. St. Ry. [Omaha Street Railway] $15,000. U.P. Co. 80% of balance. B. & M. Co. 20% of balance." A total of 2,894,741 pounds of steel went into the structure, of which 2,805,943 pounds were fabricated by Lassig Bridge and Iron Works in Chicago. In the late 1930s, local business and civic organizations agitated to have the viaduct widened. The state engineer and the U.S. Bureau of Public Roads got involved, and the state applied to the Federal Aid Grade Crossing Program for funds to reconstruct the viaduct. Apparently, however, funds were not forthcoming. Instead, the Union Pacific undertook extensive repairs in 1940. Carrying a major urban artery, the 16th Stret Viaduct is significant as one of the oldest surviving viaducts in a city characterized by such large-scale structures.

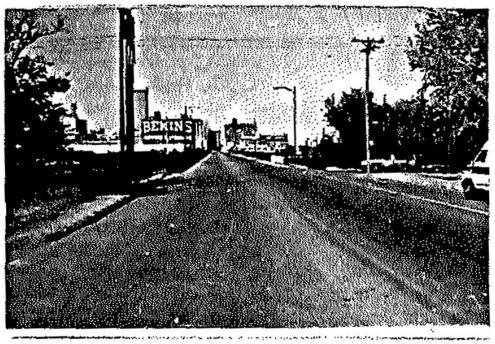
NAME(S) OF STRUCTURE

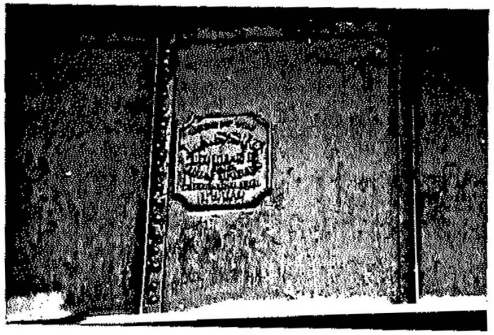
16th Street Viaduct

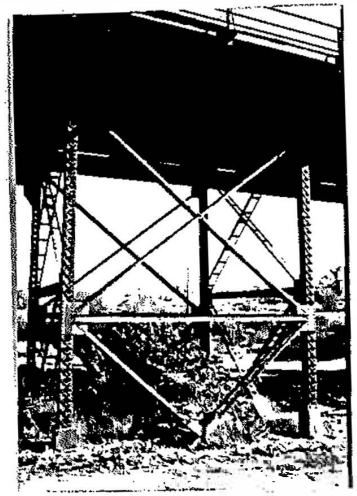
PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP







SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number U1825J5505; phone interview with Paul Welsch, Senior Structures Designer, Union Pacific Railroad, 7 January 1991; entries for 16th Street Viaduct in bridge book for Nebraska Division Main Line, and plans for 16th Street Viaduct, at Bridge Department, Union Pacific Railroad, Omaha, Nebraska; Omaha City Council Records, 28 April 1885 (#755, no vol., p. 591), 21 May 1895 (#87, v. A-29,; pp. 538-40), 5 October 1897 (#70, v. A-37, pp. 214-15), 16 August 1898 (#3668, v. A-40, pp. 226-27), 9 May 1899 (#1495, v. A-42, pp. 345-46), 11 July 1899 (v. A-43, pp. 92-94), 18 May 1909 (#1801, v. A-65, pp. 59-60), 6 February 1912 (#751, v. A-85, p. 423), 12 January 1937 (#168, v. 167, pp. 7338-9), 2 February 1937 (#413, v. 167, p. 7435), 2 March 1937 (#717, v. 167, p. 7552), 9 March 1937 (#774, v. 167, p. 7572), 13 September 1938 (#3325, v. 171, p. 10260); "Omaha, Neb., Sixteenth Street Viaduct," **Engineering News and American Contract Journal** 15 (22 May 1886): 330; field inspection by Robert M. Frame, 24 October 1989.

INVENTORIED BY

Charlene K. Roise

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Ed Creighton Viaduct [Martha Street Viaduct] DOUG19
NDOR: U1825K2205

DATE(S) OF CONSTRUCTION
1931

LOCATION
Martha Street over Union Pacific / Burlington Northern Railroads
Omaha; Douglas County, Nebraska

USE (ORIGINAL / CURRENT)
city street viaduct / city street viaduct

RATING NRHP non-eligible (demolished)

CONDITION
demolished

OWNER
railroad

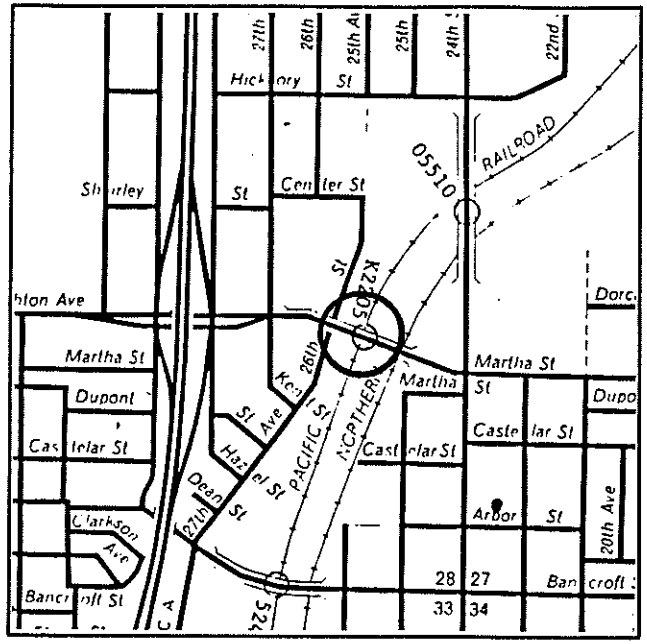
span number:	1	superstructure:	riveted Parker through truss with stringer, deck girder and concrete girder approaches
span length:	234.0'	substructure:	steel built-up piers (west), concrete columns (east)
total length:	948.0'	floor/decking:	concrete deck over I-beam stringers
roadway wdt.:	22.0'	other features:	upper chord: built-up channel beams with cover plate and X-lacing; lower chord: 2 channels with battens top and bottom; verticals: built-up I-beams, channels with lacing; diagonals: built-up I-beams; sway bracing: angles with X-lacing; floor beams: built-up girder beams; top laterals: angles with X-lacing; bottom laterals: angles; railings: lattice; sidewalk: north side only, on cantilevered brackets

In the winter of 1926-27, the Omaha Public Works Superintendent studied locations where graded separations might be needed. Among his recommendations was construction of a viaduct from 27th Street and Creighton Avenue eastward to 24th Street. In January the city council agreed, and directed that appropriate negotiations be begun. On June 12, 1928, Joseph Koutsky, city superintendent, explained the lack of progress on this matter to the council: "After dilly-dallying along for over one year, at this time, the Union Pacific Railroad Company and the Chicago, Burlington & Quincy Railroad Company, over the property of which the viaduct would be built, refuse to state whether or not they will build the viaduct." He added in frustration that "it is the opinion of the Department of Public Improvements that said companies do not contemplate building such viaduct, without the necessary legal procedure by the City Council, this department having exhausted all its prestige and influence in trying to put over this viaduct." The threat of a lawsuit apparently attracted the railroads' attention. In a meeting with the city's attorney, railroad representatives claimed that they had not arbitrarily refused to build the structure, "but that they were convinced that the viaduct would not serve a sufficient number of persons to justify its construction and that the public would be better served if the existing Bancroft St. viaduct were reconstructed." The railroads, however, were apparently persuaded to change their minds. On July 16, 1929, the city engineer relayed the news that the Union Pacific had agreed to build the viaduct with the cooperation of the Burlington line. In the following month, the council asked the Union Pacific "to expedite the plans for the Ed Creighton Viaduct and turn them over to the City Engineer as soon as possible." Fabricated by the Omaha Steel Works, the structure was apparently completed in 1931. Omaha's early prosperity was due to its central location on the nation's first transcontinental railroad. The resulting profusion of tracks, however, led to street congestion and created hazardous intersections. The Creighton Viaduct is one of a number of structures built to separate rail and other traffic. Viaducts for many of Omaha's major streets were developed around the turn of the century. State and federal governments became concerned with grade separation in the 1920s, with federal relief programs targeted at improvements later in the 1930s. The Ed Creighton Viaduct was being demolished at the time of this writing.

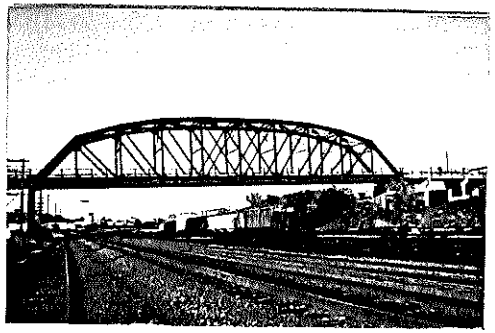
NAME(S) OF STRUCTURE

Ed Creighton Viaduct [Martha Street Viaduct]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number U1825K2205; Omaha City Council Records, 4 January 1927 (#8, v. A-144, p. 713), 18 January 1927 (#331, v. A-144, p. 823), 12 June 1928 (#1898, v. A-148, pp. 3906-7), 24 July 1928 (#2477, v. A-149, pp. 4137-8), 6 June 1929 (#2619, v. A-151, p. 944), 13 August 1929 (#3084, v. A-151, p. 1123); phone interview with Paul Welsch, Senior Structures Designer, Union Pacific Railroad, 7 January 1991; field inspection by Robert M. Frame, 24 October 1989.

INVENTORIED BY

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AFFILIATION

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Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Leavenworth Incline DOUG20
NDOR: U1825N2010

DATE(S) OF CONSTRUCTION
1930-31

LOCATION
Leavenworth Street over private parking lot; S22, T15N, R13E
Omaha; Douglas County, Nebraska

USE (ORIGINAL / CURRENT)
city street ramp / city street ramp

RATING NRHP non-eligible (score: 31)

CONDITION

OWNER
City of Omaha

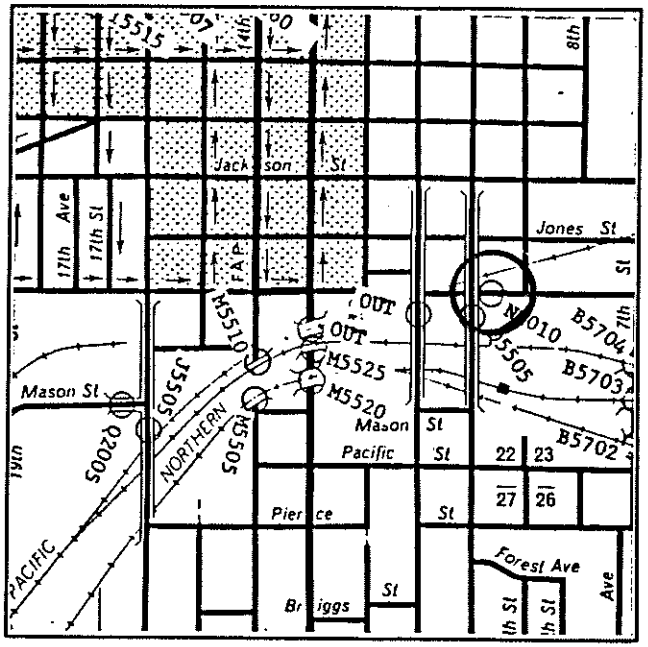
span number:	21	superstructure:	steel stringer ramp
span length:	24.0'	substructure:	concrete; built-up steel H-beam piers with concrete footings
total length:	481.0'	floor/decking:	double-layer timber deck over I-beam stringers
roadway wdt.:	30.0'	other features:	This is a ramp extending eastward and down from the Tenth Street Viaduct (DOUG22), along the north edge of an elevated parking lot by the Union Pacific Station. The plaza/parking lot is of similar steel construction. Floor beams resting on columns carry stringers on brackets. Curved floor beam ends support railing posts. Both sides have lattice railing

An I-beam stringer ramp between 10th Street and the Union Depot plaza was apparently built in 1899 with steel provided by the Lassig Bridge and Iron Works of Chicago. Some modifications, particularly to the substructure, were completed in 1908-09. When a new Union Depot and parking plaza were constructed in 1931, the ramp was rebuilt by the Milwaukee Bridge Company. Many parts from the 1899 structure were salvaged and reused, however, including floor beams, stringers and sections of hand railing. A number of new bents were installed; some existing bents were left in place, with the addition of increased bracing.

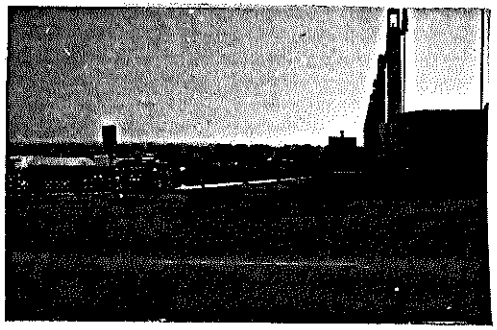
Designed in 1931 by Los Angeles architect Gilbert Stanley Underwood, the 1931 Union Passenger Terminal has been labeled "Omaha's best known Art Deco structure" by the Omaha Landmarks Heritage Preservation Commission. The Leavenworth Incline has historical significance for its association with the terminal's construction and, visually, is part of the terminal's historical environment. The incline is otherwise undistinguished.

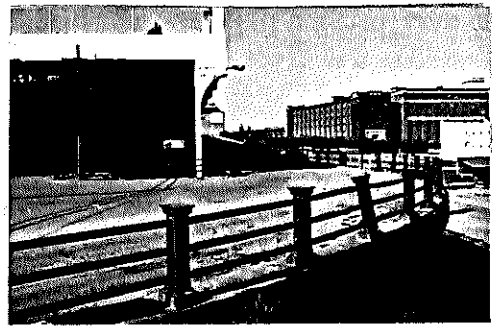
NAME(S) OF STRUCTURE
Leavenworth Incline

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number U1825N2010; phone interview with Paul Welsch, Senior Structures Designer, Union Pacific Railroad, 7 January 1991; entries for 10th Street Viaduct in the bridge book for the Nebraska Division Main Line, and plans for 10th Street Viaduct and Incline, located at Bridge Department, Union Pacific Railroad Company, Omaha, Nebraska; Omaha Landmarks Heritage Preservation Commission, **A Comprehensive Program for Historic Preservation in Omaha** (Omaha: Klopp Printing Company, 1980), p. 88; **Omaha, Nebraska**, vol. 1 (New York: Sanborn Map Publishing Company, 1934), at Omaha Public Library; field inspection by Robert M. Frame, 24 October 1989.

INVENTORIED BY
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DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Mason Street Ramp
NDOR: U1825Q2005

DOUG21

DATE(S) OF CONSTRUCTION
1929

LOCATION
Mason Street over Union Pacific Railroad; S22, T15N, R13E
Omaha; Douglas County, Nebraska

USE (ORIGINAL / CURRENT)
city street ramp / city street ramp

RATING NRHP non-eligible (score: 29)

CONDITION
excellent

OWNER
City of Omaha

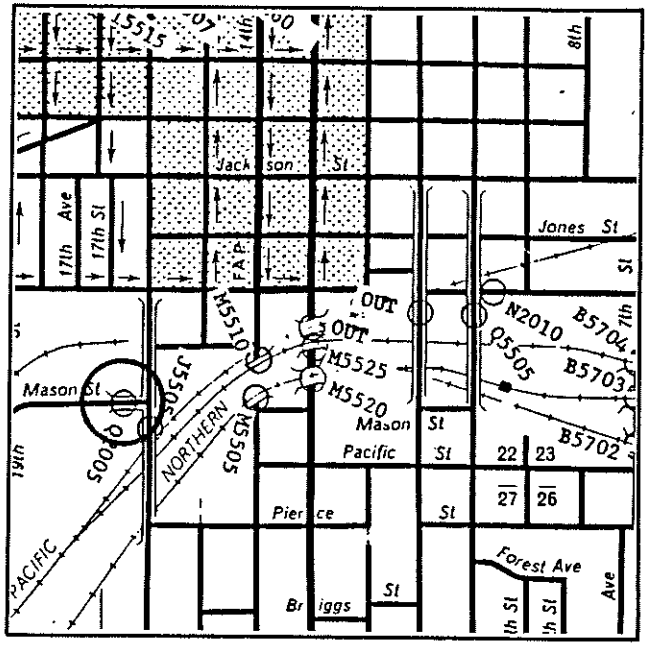
span number:	11	superstructure:	steel stringer
span length:	30.0'	substructure:	concrete abutments, back- and wingwalls; 4-post, steel H-beam piers
total length:	320.0'	floor/decking:	asphalt on timber deck over I-beam stringers
roadway wdt.:	30.2'	other features:	10 stringers with bridging; sidewalk north side only, wood plank on cantilevered brackets and floor beam ends; pipe railing carried by pipe posts. East end intersects 16th Street Viaduct (DOUG18)

The east end of the Mason Street Ramp is attached at a 90-degree angle to the 16th Street Viaduct (DOUG18). The latter structure was built in 1900, and carries a major street connecting downtown with south Omaha. The Mason Street Ramp was added in 1929, probably in conjunction with the construction/reconstruction of the Union Pacific and Burlington Railroad passenger stations nearby, which were connected by a covered concourse over the tracks. According to a local publication, completion of these stations "marked the successful conclusion of an eight-year campaign led by a Chamber of Commerce committee to improve Omaha's railroad terminal facilities." By providing a link to the 16th Street Viaduct, the Mason Street Ramp played a part in the area's renovation.

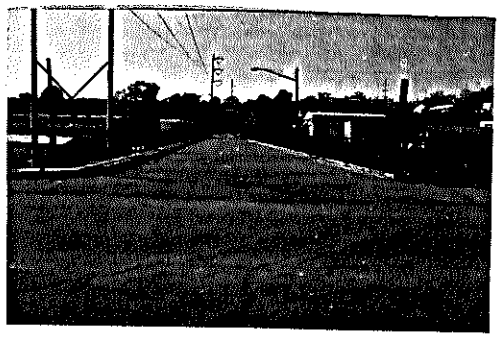
Steel for the ramp came from the Paxton Vierling Iron Works, the oldest metal working shop in Omaha. The structure's straightforward stringer spans are a utilitarian choice typical for the first decades of the twentieth century. As such, the ramp does not have any particular engineering significance. It is a standard structure built as part of an growing effort in the 1920s to separate rail and vehicular traffic. Since the ramp was not an original component of the 16th Street Viaduct, it does not have an impact on the viaduct's integrity.

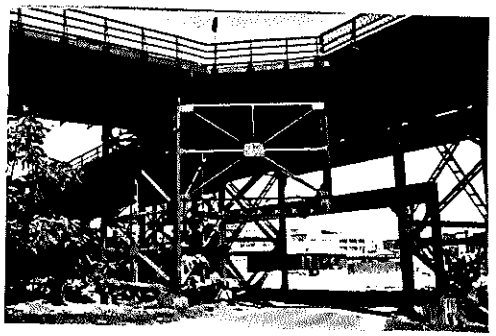
NAME(S) OF STRUCTURE
Mason Street Ramp

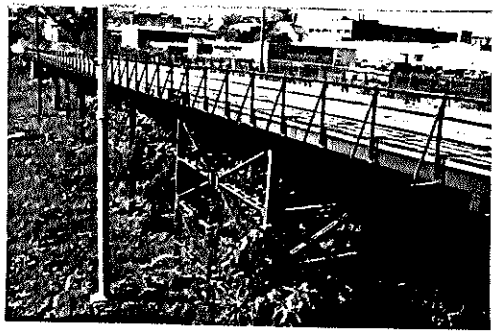
PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP







SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number U1825Q2005; phone interview with Paul Welsch, Senior Structures Designer, Union Pacific Railroad, 7 January 1991; plan for Mason Street Ramp, at Bridge Department, Union Pacific Railroad Company, Omaha, Nebraska; Omaha Landmarks Heritage Preservation Commission, **A Comprehensive Program for Historic Preservation in Omaha** (Omaha: Klopp Printing Co., 1980), p. 65; field inspection by Robert M. Frame, 24 October 1989.

INVENTORIED BY
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AFFILIATION
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Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
10th Street Viaduct
NDOR: U1825Q5505

DOUG22

DATE(S) OF CONSTRUCTION
1890; 1929; 1939-40

LOCATION
10th Street over Union Pacific / Burlington Northern Railroads
Omaha; Douglas County, Nebraska

USE (ORIGINAL / CURRENT)
city street viaduct / city street viaduct

RATING NRHP eligible (score: 61)

CONDITION
very good

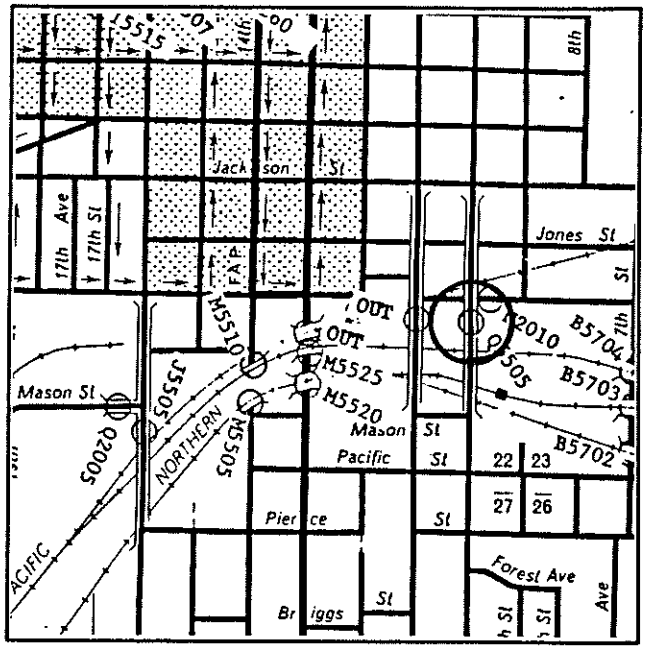
OWNER
railroad

span number:	31	superstructure:	steel deck plate girder with steel stringer approach spans
span length:	75.0'	substructure:	concrete and steel pile columns
total length:	1304.0'	floor/decking:	concrete deck over I-beam stringers
roadway wdt.:	60.0'	other features:	4 deck plate girders with I-beam stringers in between; concrete curbs with ornamental detailing; concrete sidewalks carried on cantilevered brackets; lattice railings; metal stairs on west side at Leavenworth and on east side at north end; early light standards, some with new lamps; east side of viaduct is intersected by Leavenworth ramp (**DOUG20**)

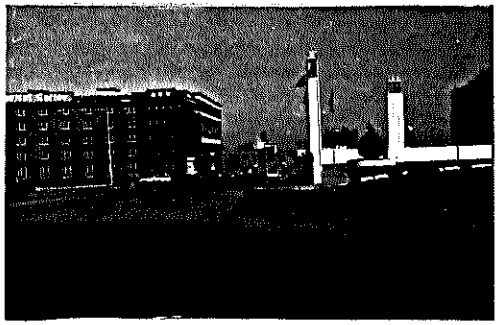
Plans for a viaduct on 10th Street were presented to the Omaha City Council in 1874, the earliest reference to viaduct construction in the council records. While it is uncertain if anything was built in the 1870s, a 1285-foot steel viaduct was erected at this location in 1890. In 1929 the council ordered the CB&Q Railroad to reconstruct the south end of the structure and authorized the railroads to "connect [the] easterly side of said viaduct with the plazas to be constructed by said railroad companies at their respective passenger stations." The eastern connection referred to the Leavenworth Incline (**DOUG20**), completed in 1931 in conjunction with the new Union Passenger Terminal. In 1934 the council required the UPRR to reconstruct a portion of the viaduct. UPRR records indicate that this was a 586-foot section extending from bent 45 (just south of the terminal) north to bent 17, a job completed by April 1935. In 1938 the city requested state and federal aid from Nebraska's $4,000,000 federal appropriation for public works projects. Funds for FAGM 2 (1), which included work on the 10th Street viaduct, were obligated July 13, 1939. The UPRR developed plans for the reconstruction north from bent 17 (the section over its tracks not done in 1934), provided materials for a shoofly to divert streetcar traffic during construction, and furnished use of an 80-foot girder for falsework. The railroad company which owned the tracks south of bent 45, probably the CB&Q, was presumably responsible for any work on that section. Although UPRR records refer to the project as "reconstruction," rather than new construction, the work was apparently extensive. "In Omaha a much needed improvement has been made by the replacement of a fifty year old structure over the Union Pacific Railroad at 10th and Jones streets," the highway department district engineer reported in 1940. "The construction of this structure, which is not on the highway system, was financed with Federal-aid Grade Crossing funds." Total project cost for FAGM 2 (1) was $174,960.42. Perhaps the site of the first viaduct erected in Omaha, the 10th Street Viaduct has historically served as an important link between downtown and south Omaha. The use of federal funds to reconstruct the structure marked a significant break with previous practice in Omaha, where railroads had been forced to build most viaducts. Also, prior to the federal relief projects of the 1930s, federal funds could not be used for urban construction. With a total length of 1,304 feet, the 10th Street viaduct was one of the longest structures built in the state through this program.

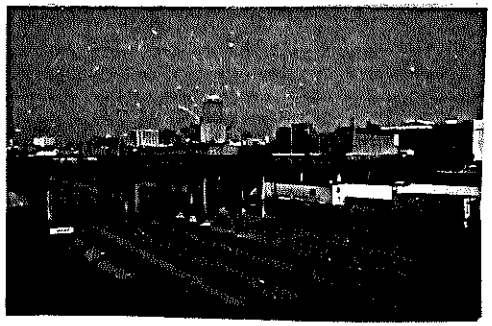
NAME(S) OF STRUCTURE
10th Street Viaduct

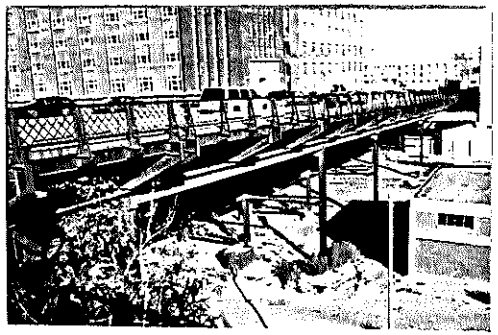
PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP







SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number U1825Q5505; phone interview with Paul Welsch, Senior Structures Designer, Union Pacific Railroad, 7 January 1991; entries for 10th Street Viaduct in bridge book for Nebraska Division Main Line, and plans for 10th Street Viaduct (1899, 1929, 1934), at Bridge Department, Union Pacific Railroad, Omaha, Nebraska; Omaha City Council Records, 19 May 1874 (#72, v. 1, p. 215), 6 June 1899 (#1902, v. A-42, pp. 522-26), 16 March 1920 (#1157, v. A-117, p. 21), 7 December 1920 (#5466, v. A-118, p. 2019), 2 August 1921 (#34255 and 3526, v. A-121, p. 3631), 16 August 1921 (#3736, v. A-121, p. 3749), 30 April 1929 (#1523, v. A-151, p. 490), 22 May 1934 (#1602, v. 161, p. 3247), 29 March 1938 (#1145, v. 169, p. 9409); John Lethem, **Historical and Descriptive Review of Omaha** (Omaha: no pub., 1892), p. 31; Nebraska Department of Roads and Irrigation, **Twenty-Third Biennial Report, 1939-40**, pp. 28, 138; field inspection by Robert M. Frame, 24 October 1989.

INVENTORIED BY
Charlene K. Roise

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
96th Street Viaduct
NDOR: U182504305

DOUG23

DATE(S) OF CONSTRUCTION
1908

LOCATION
96th Street over Union Pacific Railroad; S33/34, T15N, R12E
Omaha; Douglas County, Nebraska

USE (ORIGINAL / CURRENT)
city street viaduct / city street viaduct

RATING potentially NRHP eligible (score: 41)

CONDITION
good

OWNER
railroad

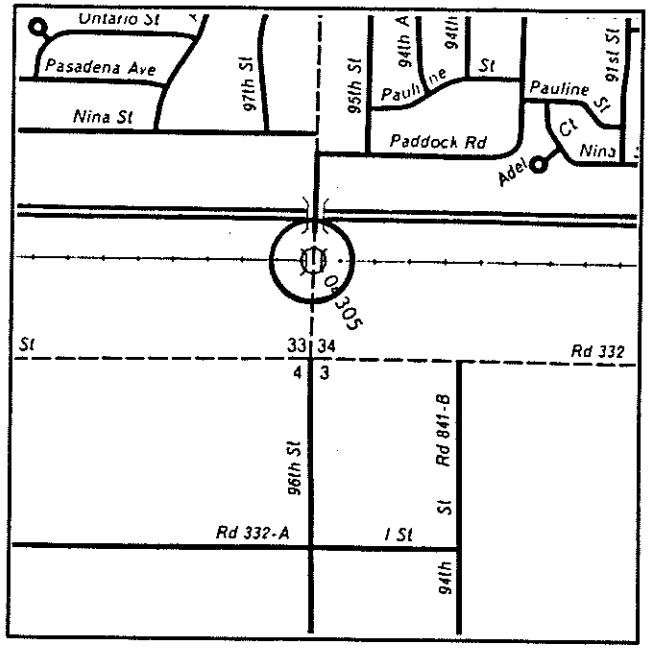
span number:	5	superstructure:	steel, through plate girder
span length:	57.0'	substructure:	concrete abutments, back- and wingwalls; built-up steel piers on concrete footings
total length:	178.0'	floor/decking:	wood plank, steel mesh deck over steel stringers
roadway wdt.:	20.0'	other features:	center span is deep plate-girder, shallower plate girders on other 4 spans have pipe railings; three intermediary stringers between through girders

According to Union Pacific records, this structure was built in 1908. A sketch shows five spans: two 28-foot, low, through plate-girder spans on the south with two similar, 32-foot spans to the north, and a 57-foot, wide-web, through plate girder in the center. Two tracks ran beneath the central span, with provision for addition of a third track in the future. Douglas County assigns the bridge number 164 and has inspection records on the structure, including a sketch giving depth of the girder three feet on the side spans and five feet on the center span. Since only two small repair expenditures are listed by the county, the viaduct appears to have been primarily maintained by the railroad. It was built by the Union Pacific when it rerouted its main line in 1907-08. The company installed a flume and earth dam on the south side of the tracks in 1930 to counteract the effects of erosion. In 1937, the railroad proposed to raise the two northern spans "a max. of 18" at so. end," a project not completed until July 1940. These spans were again raised and remodeled in 1959, this time by the Nebraska Department of Roads as part of the development of the Lincoln-Omaha Interstate. The Union Pacific raised the structure's south end in 1966, adding the plate visible between the two southern spans and the bent. These alterations are minor and do not harm the integrity of the structure.

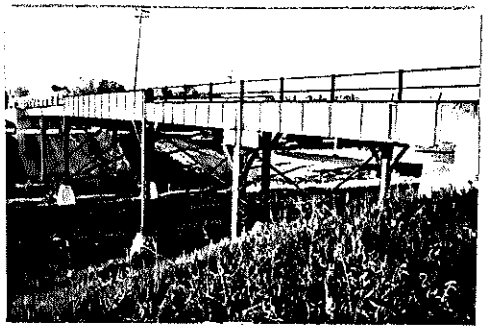
This is an early and well-preserved example of a structure designed to separate rail and vehicular traffic. According to a state report, only about five percent of such crossings have any sort of protection in 1917, mostly concentrated in densely populated areas. Grade separation did not become a major focus of the state highway department until the 1920s and 1930s.

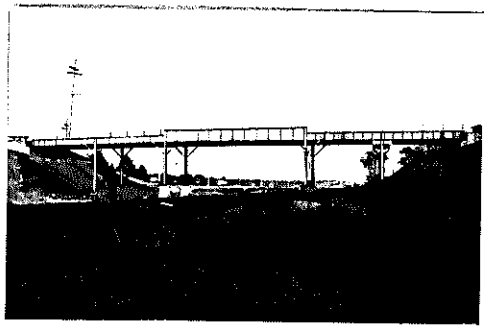
NAME(S) OF STRUCTURE
96th Street Viaduct

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number U182504305; phone interview with Paul Welsch, Senior Structures Designer, Union Pacific Railroad, 7 January 1991; entries for 96th Street Viaduct in bridge book for Nebraska Division Main Line, and bridge files for Bridge Number 164, located in vault of Douglas County Highway Building, Omaha, Nebraska; Nebraska Department of Public Works, **Monthly Report**, April 1920, p. 22; field inspection by Robert M. Frame, 25 October 1989.

INVENTORIED BY
Charlene K. Roise

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
36th Street Viaduct
NDOR: U182505315

DOUG24

DATE(S) OF CONSTRUCTION
original unknown; extension: 1908

LOCATION
36th Street over Union Pacific / Chicago and North Western RRs; S32/33, T15N, R13E
Omaha; Douglas County, Nebraska

USE (ORIGINAL / CURRENT)
city street viaduct / city street viaduct

RATING NRHP eligible (score: 60)

CONDITION
good

OWNER
railroad

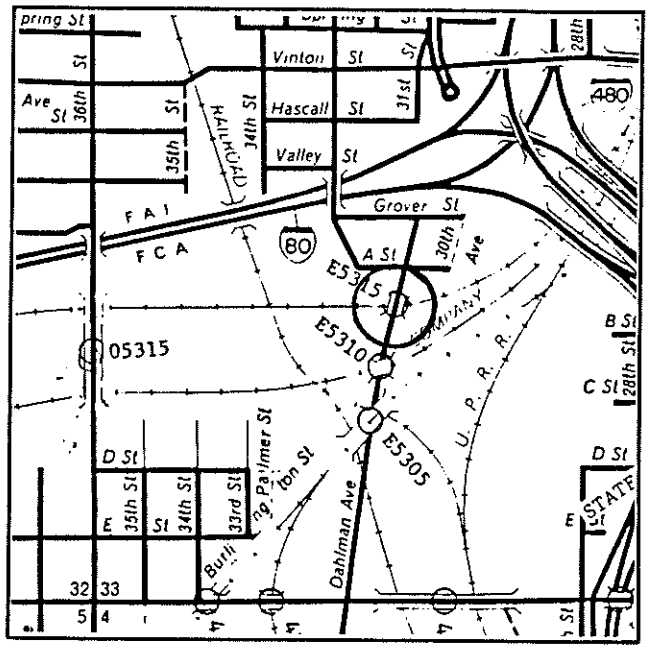
span number:	7	superstructure:	steel, rigid-connected Warren pony and deck trusses with timber approach spans
span length:	108.0'	substructure:	timber abutments and backwalls; built-up steel bents on stone-block foundation
total length:	706.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	19.0'	other features:	upper chord: back-to-back channel beams with cover plate and lacing; lower chord: 4 angles with lacing; verticals: crossed angles; diagonals: 2 angles with lacing; floor beams: rolled I-beams riveted to gusset plate; bottom laterals: angles; railings: wood rail; sidewalk: wood, west side only

This structure originally consisted of four Warren pony trusses and, on the north end, one Warren deck truss, with pile trestle approaches. The construction date is unknown. In May 1907, the Union Pacific devised plans to raise the two northern pony trusses and the deck truss, remove the northern trestle approach, and add two additional Warren ponies to the north. The tower supporting the north end of the deck truss was recycled to hold one of the new trusses, and piers, fill, and pile trestles were added where required to complete the new substructure and approach. The railroad undertook the complicated rearrangement in order to place more tracks through this ravine, specifically the main line of the Union Pacific which was in the process of being rerouted. Dirt was excavated beneath the northernmost truss to allow room for two new railroad tracks, and a note on the plans added that the track layout beneath the span was "arranged to provide for 3 future tracks on South side and one on North side." The plans also mention that "sidewalks [are] not to be put on bridge at present time, but provision [is] to be made for their addition when desired." This did not occur until 1930-31, when a five-foot sidewalk was cantilevered out from the structure's west side. Other than this addition and maintenance-related repairs, the bridge is essentially unaltered since the 1908 renovation.

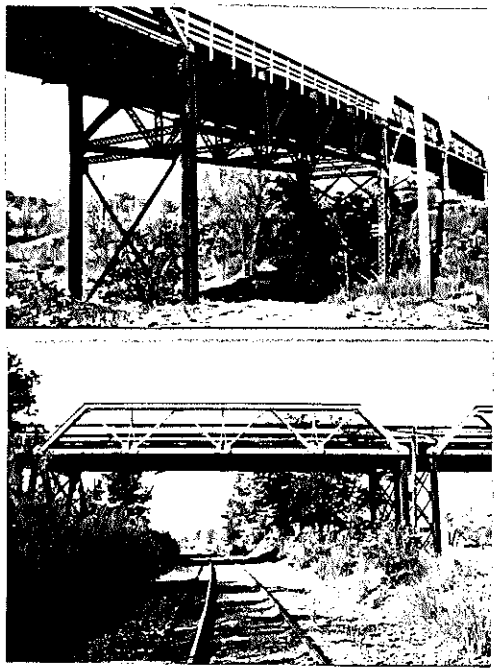
This viaduct is an early example of grade separation in Nebraska, which owed its initial prosperity to its key location on the nation's first transcontinental railroad. The structure's well-documented 1908 reconstruction and its excellent state of preservation make this bridge noteworthy. The Warren pony truss is rare in Nebraska because the state engineer's office and most counties favored the Pratt design. In addition, the Union Pacific engineer's use of crossed angles for verticals and the appearance of a deck truss on the original structure is unusual.

NAME(S) OF STRUCTURE
36th Street Viaduct

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number U1825O5315; phone interview with Paul Welsch, Senior Structures Designer, Union Pacific Railroad, 7 January 1991; entries for 36th Street Viaduct in bridge book for Nebraska Division Main Line, and plans for extension of 36th Street Viaduct (1907), at Bridge Department, Union Pacific Railroad Company, Omaha, Nebraska; field inspection by Robert M. Frame, 25 October 1989.

INVENTORIED BY
Charlene K. Roise

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
24th Street Viaduct
NDOR: U182505510

DOUG25

DATE(S) OF CONSTRUCTION
1901

LOCATION
24th Street over Union Pacific / Burlington Northern Railroads
Omaha; Douglas County, Nebraska

USE (ORIGINAL / CURRENT)
city street viaduct / city street viaduct

RATING potentially NRHP eligible (score: 51)

CONDITION

OWNER
railroad

span number:	2	superstructure:	steel pin-connected Pratt through truss with deck girder/stringer approach spans
span length:	148.0'	substructure:	solid concrete / steel pile bent piers
total length:	1002.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	35.0'	other features:	upper chord: back-to-back built-up channel beams with cover plate and lacing; verticals: back-to-back channels with lacing; diagonals: punched eye-bars; counters: square eye-rods with turnbuckles; portal bracing: angles; sway bracing: angles with double lacing; floor beams: built-up I-beam girders; top and bottom laterals: angles; railings: decorative curved lattice; sidewalks: east and west sides, wood plank on cantilevered brackets; modern guard rail at curbs

In 1892, the Omaha City Council ordered the construction of a viaduct to carry 24th Street from Hickory to a "point 100 feet more or less south of the tracks" of the Union Pacific and the Burlington and Missouri railroads. Apparently, however, no structure was built. In 1899, as part of a pact between the railroads and the city regarding a number of grade separations, the railroads proposed to build a viaduct at 24th Street. On May 15, 1899, the council urged the city engineer to submit plans for the viaduct as soon as possible. There was a delay, however, and city engineer Andrew Rosewater did not present the plans until October 1900. Some design changes were required because of objections by adjacent property owners, but construction was underway by the following spring. After three deadline extensions, the structure was finally completed. On November 28, 1901, the South West Improvement Club hosted a celebration to commemorate the long-awaited opening of the 24th Street Viaduct.

The railroad companies became alarmed about the weight of streetcars crossing the viaduct in 1909, but the city engineer concluded that there was no cause for concern. In the following year, it was the City Council that worried about the viaduct, instructing the city engineer to notify the railroads that the viaduct needed to be repaved and giving the engineer authority to close the structure "if in his judgement such action is necessary to protect the travelling public." The paving was apparently completed. Only a few years later, the railroads once again contacted the Council: "Your attention is called to the fact that the Street Car Company is in the habit of operating their cars at a high rate of speed over the Sixteenth and Twenty-fourth Street viaducts... thereby endangering the structures themselves, and the lives and property of individuals." The railroads requested that a speed limit be placed on street car traffic to prohibit breakneck speeds of 16 to 22 miles per hour.

Little attention was given to the structure again until June 29, 1926, when the City Council demanded that the railroads maintain the structure as promised in the 1899 agreement. The Council was alarmed that "the condition of said viaduct at the present time is

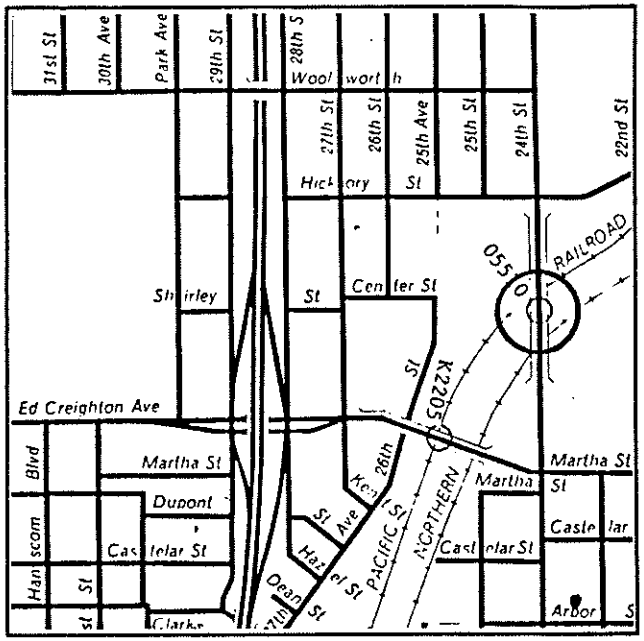
dangerous, unsafe, and unfit for public travel over the surface of said structure, the wooden planks are loose, and large spikes protrude in many places from the said planks... The Fire Department of the City have been called upon to respond to fires on said viaduct on average of two and three times each week, said fires caused by lighted cigarette and cigar stubs tossed from passing vehicles and alighting in the cracks between the planks on said viaduct." They insisted that the floor be replaced with "a permanent pavement similar to the surface of the tenth and sixteenth street viaducts." When no response was received by mid-August, the Council decided that the railroads should reconstruct rather than simply repair the structure. Growing even more angry in the following month, the Council moved that the railroads repair the structure "pending the construction of the new viaduct." Apparently, the Council was appeased on September 21, when the Union Pacific and the Chicago, Burlington and Quincy railroad companies finally presented plans for repairing the structure.

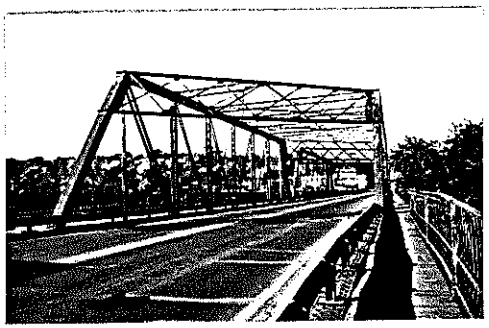
The 24th Street viaduct is one of the earliest grade separations surviving in Omaha, a city which owed its early prosperity to a key location on the nation's first transcontinental railroad. It was apparently designed by Andrew Rosewater, who served for many years as Omaha's city engineer, and built by the Union Pacific and Burlington and Missouri Railroads. It carries a major artery connecting downtown with south Omaha.

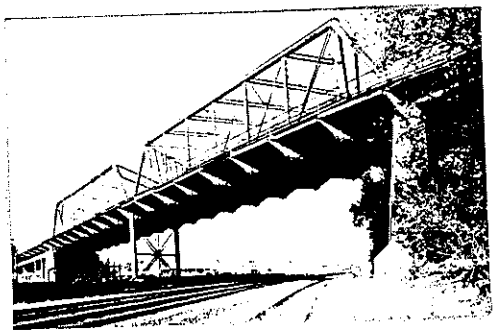
NAME(S) OF STRUCTURE

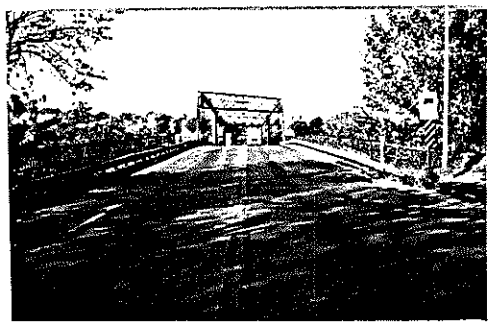
24th Street Viaduct

PHOTOS AND SKETCH MAP OF LOCATION









LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number U182505510; Omaha City Council Records, 26 July 1892 (no vol., p. 591), 16 May 1899 (#1599, v. A-42, p. 387), 6 June 1899 (#1902, v. A-42, pp. 522-26), 2 October 1900 (#4002, v. A-47, p. 136), 23 April 1901 (#1334, v. A-48, p. 406), 27 August 1901 (#2918, v. A-49, p. 526), 24 September 1901 (#3193, v. A-50, p. 67), 29 October 1901 (#3616 and 3617, v. A-50, p. 211), 19 November 1901 (#3804, v. A-50, pp. 299-300), 18 May 1909 (#59, v. A-65, p. 59), 21 June 1910 (#3319, v. A-79, p. 472), 6 February 1912 (#751, v. A-85, p. 423), 29 June 1926 (#4114, v. A-142, pp. 9475-76), 17 August 1926 (#5111, v. A-143, p. 9842), 7 September 1926 (#5531, v. A-143, p. 42), 21 September 1926 (#5794, v. A-143, p. 125); field inspection by Robert M. Frame, 24 October 1989; phone conversation with Paul Welsch, Senior Structures Designer, Union Pacific Railroad, 7 January 1991

INVENTORIED BY	**AFFILIATION**	**DATE**
Charlene K. Roise	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bancroft Street Viaduct DOUG26
NDOR: U182552405

DATE(S) OF CONSTRUCTION
1913

LOCATION
Bancroft Street over Union Pacific/Burlington Northern/CNWTC Railroad tracks; S28/33, T15N, R13E
Omaha; Douglas County, Nebraska

USE (ORIGINAL / CURRENT)
city street viaduct / city street viaduct

RATING potentially non-eligible (score: 41)

CONDITION

OWNER
railroad

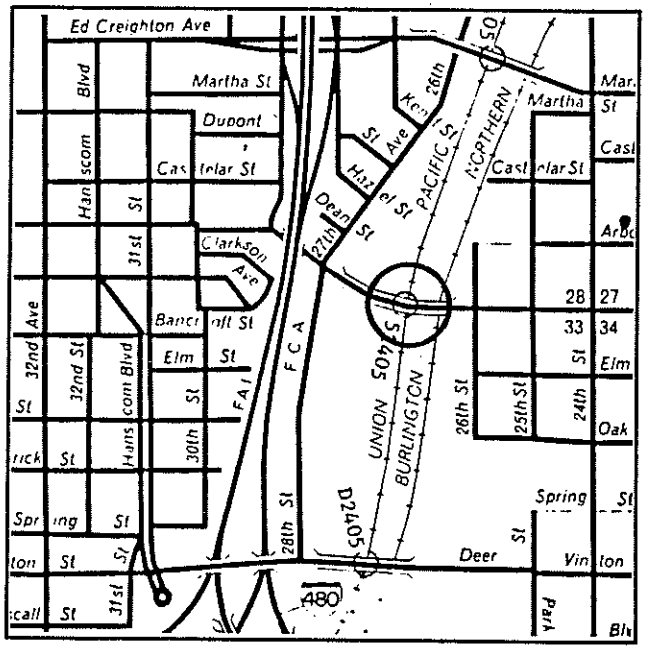
span number:	30	superstructure:	steel, through and deck plate girders
span length:	90.0'	substructure:	2 column concrete piers, built-up steel (laced channels) piers
total length:	1117.0'	floor/decking:	asphalt over timber, concrete and steel deck
roadway wdt.:	20.0'	other features:	girder depth varies with length of span: deep girder between 2 concrete piers, where deck turns; east central span is through girder; wood plank and concrete sidewalks both sides, carried on outside brackets with knee braces; lattice railing, with decorative cast end post on east railing

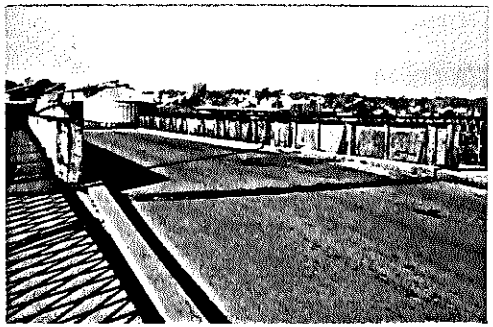
On March 10, 1908, the Omaha City Council directed the city engineer to prepare plans for a viaduct from a point near the intersection of 30th Street and Arbor Place Extension east to Bancroft Street, over the intervening railroad tracks. In November, the Chicago, Burlington and Quincy Railroad protested, since they had already built a subway at that location as previously demanded by the city. The Council was not dissuaded, and the following January passed an ordinance requiring that the Bancroft viaduct be constructed by the Union Pacific, the Chicago, Burlington and Quincy, the Mason City and Fort Dodge, and the Chicago Great Western railroads, and the Omaha Grain Terminals. In October 1910, the Council once again told the city engineer to draft plans and specifications for the Bancroft Viaduct. These were apparently a resubmission of the earlier plans, because only a week later they were brought to the Council by George L. Campen, assistant city engineer. On February 11, 1911, the Council held the final reading of the ordinance requiring the railroads to build the viaduct, and split the costs between themselves. The railroads complied. On November 13, 1913, the Council accepted the invitation of the "Citizens of South End Committee" to attend a celebration several days later in honor of the viaduct's completion.

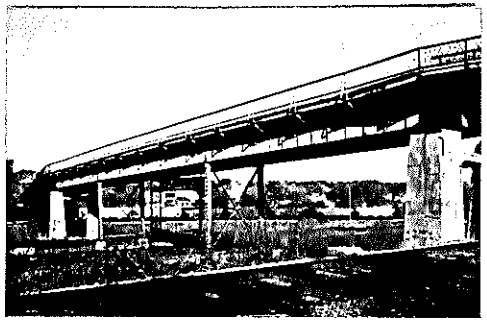
The Bancroft Street Viaduct is one of a number of structures built in the late nineteenth and early twentieth centuries to separate rail and vehicular traffic. The structure's 1,117-foot length marks it as a significant crossing, but the maximum span length of ninety feet is not particularly noteworthy. Plate girder spans were commonly used for grade separations.

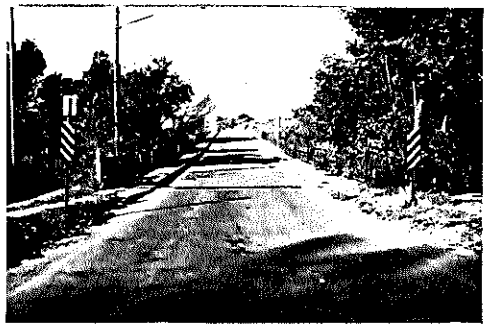
NAME(S) OF STRUCTURE
Bancroft Street Viaduct

PHOTOS AND SKETCH MAP OF LOCATION









SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number U182552405; Omaha City Council Records, 10 March 1908 (#899, v. A-70, p. 473), 3 November 1908 (#5461, v. A-73, p. 274), 12 January 1909 (#181, v. A-74, p. 274), 18 October 1910 (#5289, v. A-80, p. 567), 25 October 1910 (#5381 and 5382, v. A-80, p. 605), 14 February 1911 (#700, v. A-81, p. 568), 13 November 1913 (#5365, v. A-91, p. 674); field inspection by Robert M. Frame, 25 October 1989.

INVENTORIED BY
Charlene K. Roise

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Benkelman Bridge [Republican River Bridge] DUND01
NDOR: S061 00053

DATE(S) OF CONSTRUCTION
1939

LOCATION
State Highway 61 over South Fork of Republican River; S31, T1N, R37W
2.9 miles south of Benkelman; Dundy County, Nebraska

USE (ORIGINAL / CURRENT)
highway bridge / highway bridge

RATING determined NRHP non-eligible (score: 42)

CONDITION
excellent

OWNER
Nebraska Department of Roads

span number:	5	superstructure:	steel cantilevered stringer, skewed
span length:	88.0'	substructure:	concrete abutments and wingwalls on steel piles; concrete piers on steel tubes
total length:	400.0'	floor/decking:	asphalt over concrete decking with
roadway wdt.:	24.0'	other features:	guardrail: steel angle with concrete curb

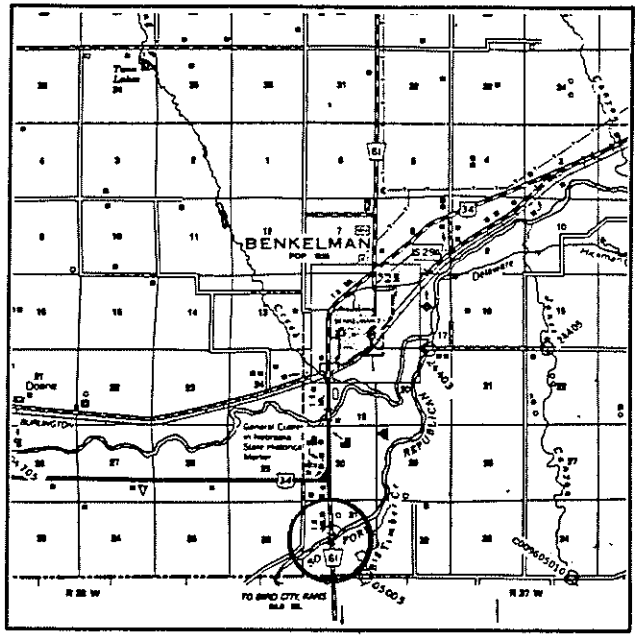
The Benkleman Bridge carries State Highway 61 across the South Fork of the Republican River about three miles south of Benkelman, near the Kansas state line. The skewed structure is comprised of five cantilever steel stringer spans with an overall length of 400 feet. The longest individual span measures 88 feet. Plans for the bridge were drawn by the Nebraska Bureau of Roads and Bridges in September 1938. In addition to this steel structure, Project 439 (1) also encompassed grading, gravel work, and the building of culverts. A construction contract for the project was awarded in December 1938 to the Bushman Construction Company of Saint Joseph, Missouri, for $77,950.11. Using steel fabricated by the Saint Joseph Structural Steel Company, Bushman erected the structure during the winter of 1939. The Benkelman Bridge carried traffic for fifty years without alteration. In 1990, however, its roadway was widened, substantially altering the bridge.

The Benkelman Bridge typifies Nebraska highway construction of the 1930s.

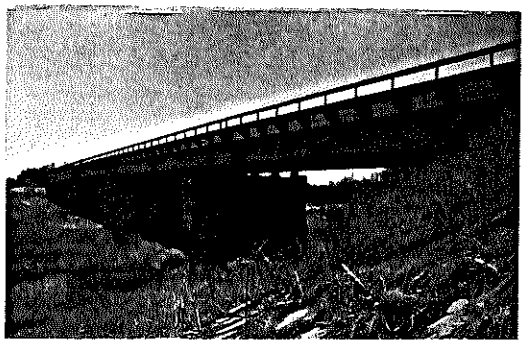
NAME(S) OF STRUCTURE

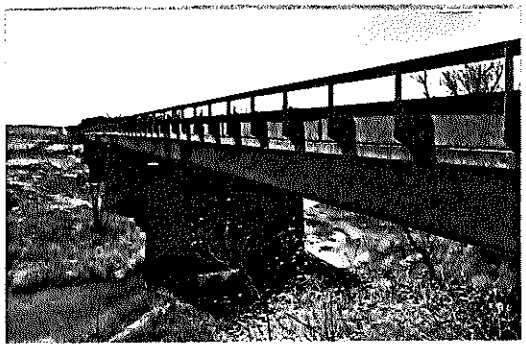
Benkelman Bridge [Republican River Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number S061 00053; Drawings for 400" Multiple Span Deck Steel Girder Bridge, Project 439-(1), Dundy County, 16 September 1938; Twenty-Third Biennial Report of the Department of Roads and Irrigation, Part I, to the Governor of Nebraska, 1937-1938, pp. 126, 130; field inspection by Clayton Fraser, 28 March 1989.

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Gergen Bridge [Turkey Creek Bridge] FILL01
NDOR: C003000310

DATE(S) OF CONSTRUCTION
1920

LOCATION
county road over Turkey Creek; S17/18, T6N, R4W
4 miles west, 4.8 miles north of Schickley; Fillmore County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 21)

CONDITION
fair

OWNER
Fillmore County

span number:	1	superstructure:	concrete filled spandrel arch
span length:	25.0'	substructure:	concrete abutments with flared, sloped wingwalls
total length:	26.0'	floor/decking:	gravel over earth fill
roadway wdt.:	20.0'	other features:	concrete stringcourse, coping and parapet over spandrels

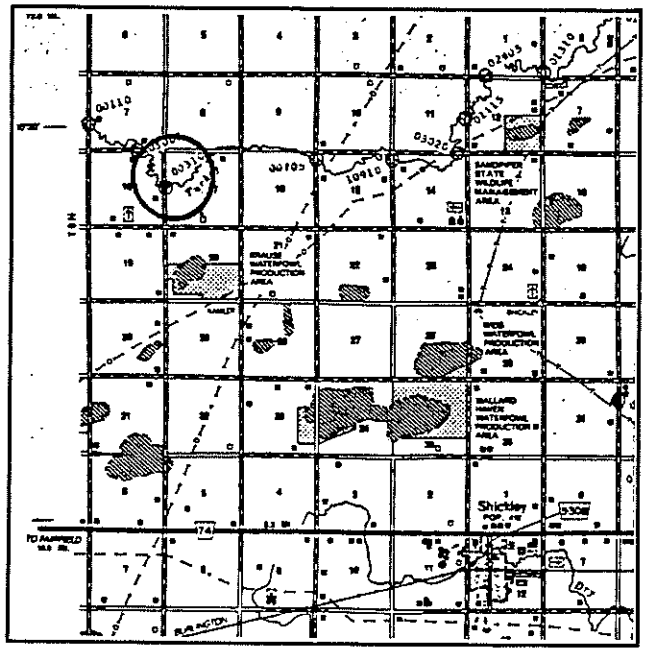
The Gergen Bridge carries a county road over Turkey Creek between Sections 17 and 18, T6N, R4W, Momence Township. The structure consists of a single filled spandrel concrete arch with flared, sloped wingwalls. A stringcourse/coping extends on top of the spandrel walls and was at one point surmounted by a solid concrete parapet, but this latter feature has since been removed. End seams or cracks are visible in the vault, indicating that the spandrel walls were poured separately from the arch. On June 15, 1920, the Fillmore County Road and Bridge Committee reported that the "Gergen Bridge" had become unsafe and needed replacement. The committee suggested building either a 25-foot concrete arch with a 20-foot roadway, or a 24-foot I-beam bridge. Given the county's clear preference for concrete, it is not surprising that it chose to build a concrete arch. The bridge was apparently not completed until 1921, as it does not appear in any lists of bridges completed during 1920. The Gergen Bridge was probably built by either Frank N. Craven of Exeter or J.W. Kempf of Schickley, who built most of the county's concrete bridges during the 1910s and early 1920s. The parapets have been removed from the Gergen Bridge since its date of construction, diminishing its physical integrity.

Fillmore County first experimented with all-concrete bridge construction in 1909, when it cooperated with Thayer County to build an eight-foot concrete span on the county line. This remained the only concrete bridge until 1914, when the county constructed two twenty-foot concrete arches. These two structures seem to have marked a turning point, for the county built concrete bridges almost exclusively through the remainder of the 1910s and into the 1920s. Of the eleven bridges built in 1916, for example, nine were concrete and only two were steel. The state engineer appears to have been largely responsible for the county's sudden acceptance of concrete. The state was a major proponent of concrete, believing it to be more durable than steel, and between 1912 and 1914 had prepared the first standardized plans for concrete bridges. Fillmore County relied on state bridge plans until 1918, when it hired William A. Biba as its county engineer. Biba, a graduate of the University of Nebraska, appears to have designed all of the county's bridges until 1931 (using state plans as a model). As one of more than thirty such small-scale concrete structures remaining in the county, the Gergen Bridge represents this construction trend. It loss of physical integrity, diminishes its interpretive value, however.

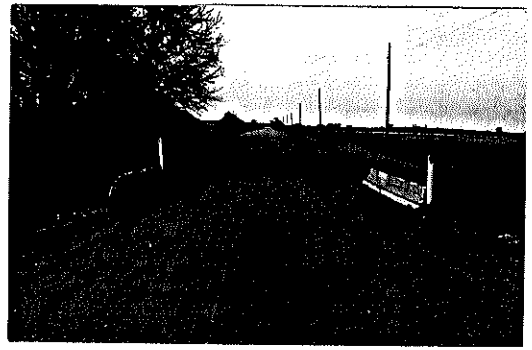
NAME(S) OF STRUCTURE

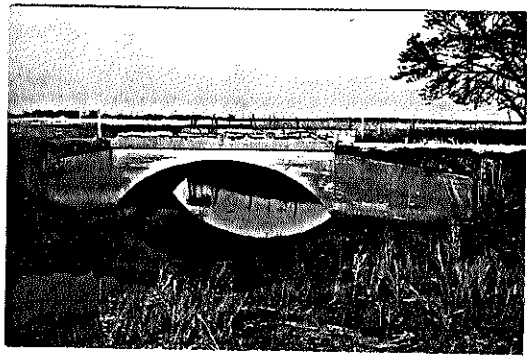
Gergen Bridge [Turkey Creek Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003000310; Proceedings of the Fillmore County Commissioners, 1903-1920, located in Fillmore County Courthouse, Geneva, Nebraska, refer to the following entries in Book 6: 15 June 1920 (page 369), 19 October 1920 (page 380), 14 December 1920 (page 383); State Board of Irrigation, **Tenth Biennial Report**, 1912-14, pages 231-34; Nebraska Department of Public Works, **Monthly Report** (October 1919): 17; field inspection by Jeffrey A. Hess, 22 April 1989.

INVENTORIED BY

Demian Hess

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge FILL02
NDOR: C003000405P

DATE(S) OF CONSTRUCTION
1914

LOCATION
county road over intermittent stream; S9, T8N, R3W
2.9 miles north, 2.5 miles east of Grafton; Fillmore County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 33)

CONDITION
good

OWNER
Fillmore County

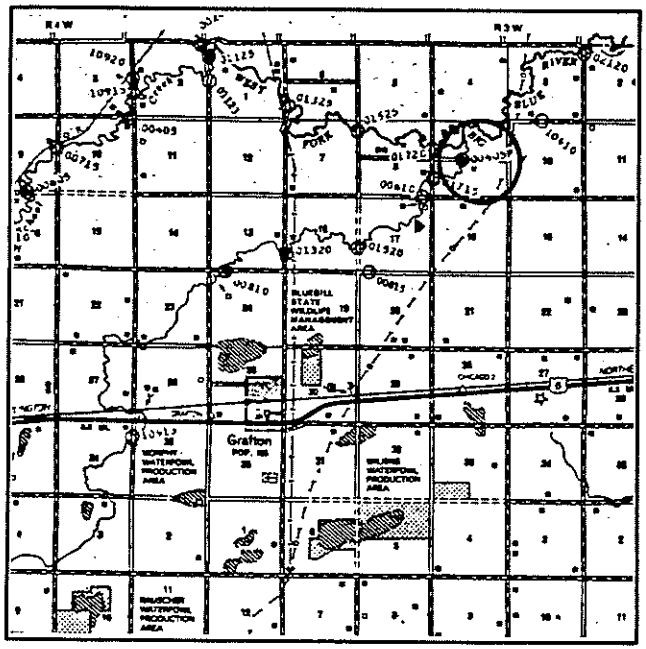
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt pony truss
span length:	40.0'	substructure:	unknown
total length:	41.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.4'	other features:	upper chord: 2 channels with cover plate and lacing; bottom chord: 2 punched rectangular eyebars; vertical: 4 angles with battens; diagonal: circular eyerods with turnbuckles; floor beam: I-beam bolted by riveted angles to bottom of vertical; sway bracing: vertical kneebraced from roadway by channel-sections attached to floor beams; railing: angles posts on channel rails

This bridge carries a county road over a small stream bed in Section 9, T8N, R3W, West Blue Township. Consisting of a single-span, pinned Pratt pony truss, the bridge is set very low to grade, and its abutments are buried. This is one of approximately sixteen bridges erected in the county by the Standard Bridge Company during 1914 as part of its annual contract. The bridge was probably built according state standardized plans which the board appears to have adopted in 1911. After 1914, the county board began to build primarily concrete bridges. Only four bridges, including this 40-foot span, are known to survive from the early period of steel construction in Fillmore County (the others: **FILL04**, **FILL20** and **FILL21**). This bridge appears to be unaltered, although state records indicate that some repairs were made in 1948.

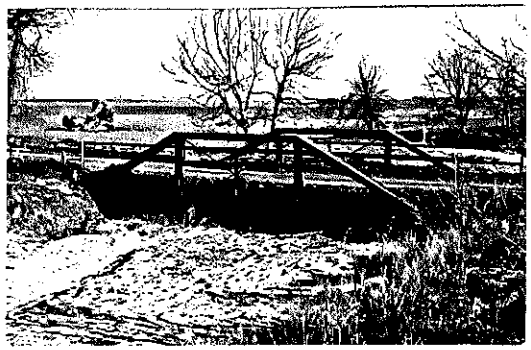
Although one of the earlier bridges remaining in Fillmore County, in truth, this structure is typical of many pony trusses built in Nebraska during the 1910s. It is relatively well-preserved but technologically and historically undistinguished.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003000405P; Proceedings of the Fillmore County Commissioners, 1903-1920, located in Fillmore County Courthouse, Geneva, Nebraska, refer to the following entries in Book 5: 11 November 1911 (page 107), 14 January 1913, (page 144); Book 6: 13 October 1914 (page 192); State Board of Irrigation, **Tenth Biennial Report**, 1912-14, pages 231-34; Nebraska Department of Public Works, **Monthly Report** (October 1919): 17; field inspection by Jeffrey A. Hess, 18 April 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Launstein Bridge
NDOR: C003000505

FILL03

DATE(S) OF CONSTRUCTION
1919-20

LOCATION
county road over stream; S28/29, T7N, R4W
3.5 miles west, 5.7 miles south of Grafton; Fillmore County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 27)

CONDITION
fair

OWNER
Fillmore County

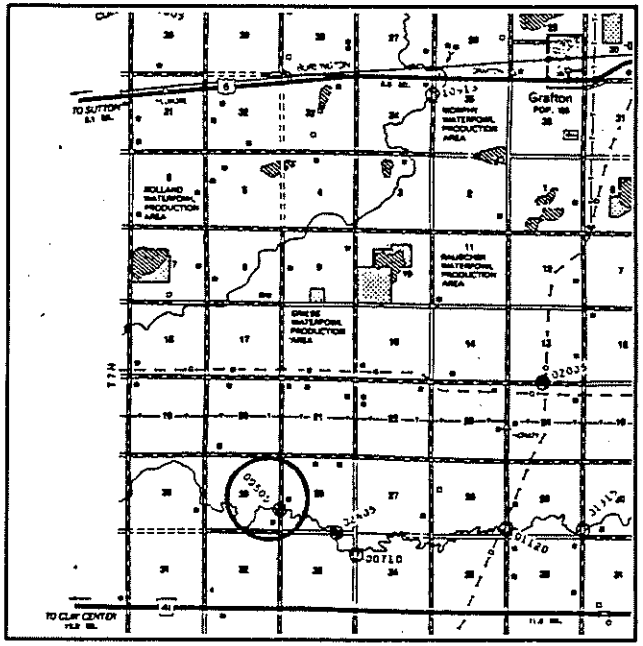
span number:	1	superstructure:	concrete filled spandrel arch
span length:	20.0'	substructure:	concrete abutments with flared, sloped wingwalls
total length:	21.0'	floor/decking:	gravel over earth fill
roadway wdt.:	20.0'	other features:	stringcourse/coping and solid parapet with incised rectangular panels run above spandrels on each elevation

The Launstein Bridge carries a county road over a small stream on the line between Sections 28 and 29, T7N, R4W, Bennett Township. The structure is composed of a single 20-foot, filled spandrel concrete arch with flared, sloped wingwalls. A coping/stringcourse runs above the spandrel walls on each side. It is surmounted by a solid concrete parapet with incised rectangular panels. The tops of the parapets have broken off, although the ornamental panels are still largely visible. Seams or cracks have also appeared near the ends of the vault. The spandrel walls appear to have been poured monolithically, and the seams have formed as the spandrels pulled away from the arch. Due to the loss of railing material, the bridge has lost integrity. On April 22, 1919, the Fillmore County Road and Bridge Committee reported that a new bridge was needed between Sections 28 and 29 of Bennett Township. Plans for the Launstein Bridge, dated May 9, 1919, are on file in the Bridge Division of the Nebraska Department of Roads, and were probably prepared by Fillmore County Engineer William Biba. According to county records, the bridge was completed by J.W. Kempf of Schickley NE in 1920.

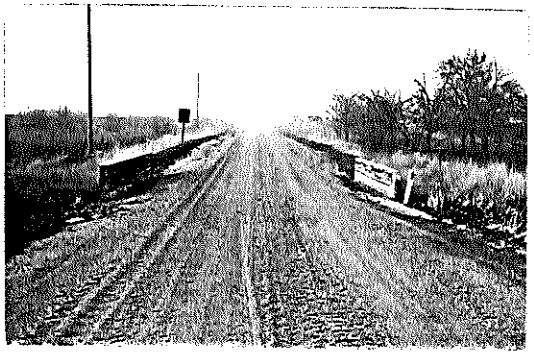
After some initial experimentation with concrete bridge construction in the early 1900s, Fillmore County built concrete arch and slab spans almost exclusively from 1914 through the 1920s. The state engineer appears to have been largely responsible for the county's acceptance of concrete. The state was a major proponent of concrete, believing it to be more durable than steel. Fillmore County relied on state bridge plans until 1918, when it hired William A. Biba as its county engineer. Biba, a graduate of the University of Nebraska, appears to have designed all of the county's bridges until 1931 (using state plans as a model). As one of more than thirty such small-scale concrete structures remaining in the county, the Launstein Bridge represents this construction trend. Due to subsequent deterioration, the bridge has lost integrity and is not eligible for the National Register.

NAME(S) OF STRUCTURE
Launstein Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003000505; Proceedings of the Fillmore County Commissioners, 1903-1920, located in Fillmore County Courthouse, Geneva, Nebraska, refer to the following entries in Book 6: 22 April 1919, p. 336; 19 October 1920, p. 380; State Board of Irrigation, **Tenth Biennial Report, 1912-1914**, pp. 231-234; Nebraska Department of Public Works, **Monthly Report** (October 1919): 17; "Plans for 20-Foot Arch. East Side Section 29, Bennett Twp. Launstein Bridge," 9 May 1919, plan number 604, located in Bridge Division, Nebraska Department of Roads; field inspection by Jeffrey A. Hess, 22 April 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
School Creek Bridge
NDOR: C003000605

FILL04

DATE(S) OF CONSTRUCTION
1914

LOCATION
county road over School Creek; S9/16, T8N, R4W
2.4 miles north, 2.9 miles west of Grafton; Fillmore County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 36)

CONDITION
good

OWNER
Fillmore County

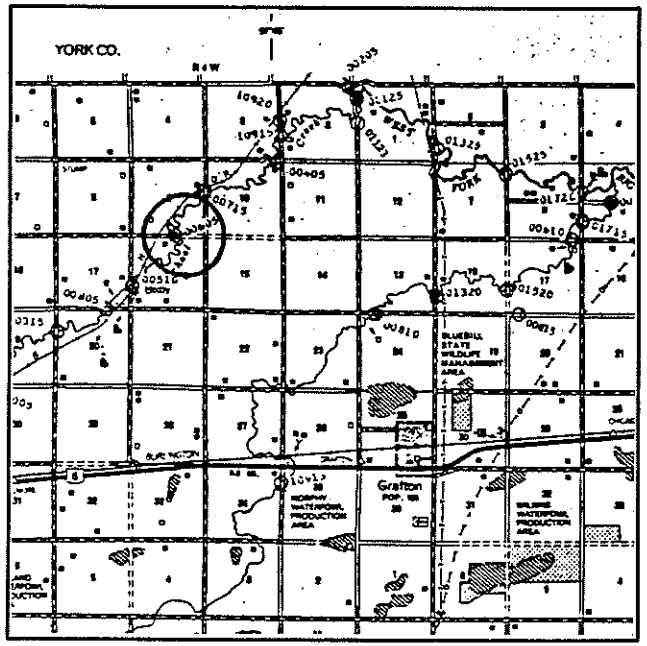
span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt pony truss
span length:	60.0'	substructure:	steel piles with steel sheet back- and wingwalls
total length:	61.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.9'	other features:	upper chord: 2 channels with cover plate and lacing; bottom chord: 2 rectangular punched eyebars; vertical: 4 angles with battens; diagonal: 2 rectangular punched eyebars; counter: circular eyerod with turnbuckle; sway bracing: outriders formed by back-to-back angles; bottom lateral: cross-braced circular eyerods with turnbuckle; floor beam: I-beam riveted to bottom of verticals by means of riveted angles; railing: angle rails on channel posts

This bridge carries a county road over a small stream on the line between Sections 9 and 16, T8N, R4W, Grafton Township. The structure is composed of a single pinned Pratt pony truss on steel pile abutments. The bridge was built in 1914 by the Standard Bridge Company of Omaha as part of its annual contract. The contractor probably used state standardized plans which the county apparently adopted in 1911. After 1914, the county largely switched to concrete construction for its bridges. Only four bridges, including this 60-foot span, are known to survive from the period of early steel bridge construction in Fillmore County (the others: **FILL02, FILL20, FILL21**). The bridge appears to be unaltered and has retained an average degree of structural integrity.

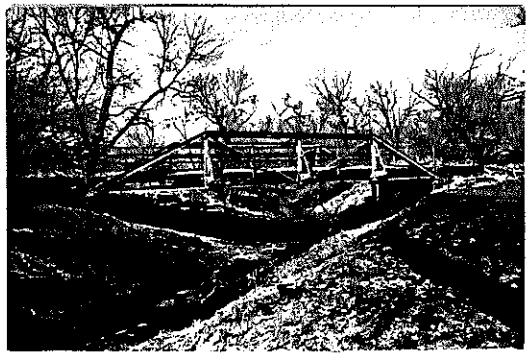
This structure is typical of many pony trusses built in Nebraska during the 1910s.

NAME(S) OF STRUCTURE
School Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003000605; Proceedings of the Fillmore County Commissioners, 1903-1920, located in Fillmore County Courthouse, Geneva, Nebraska, refer to the following entries: 11 November 1911, Book 5, p. 107; 14 January 1913, Book 5, p. 144; 13 October 1914, Book 6, p. 192; State Board of Irrigation, **Tenth Biennial Report**, 1912-1914, pp. 231-234; Nebraska Department of Public Works, **Monthly Report** (October 1919): 17; field inspection by Jeffrey A. Hess

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Indian Creek Bridge
NDOR: C003000615

FILL05

DATE(S) OF CONSTRUCTION
1919

LOCATION
county road over Indian Creek; S10/15, T8N, R2W
1.9 miles north, 2.6 miles east of Fairmont; Fillmore County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 31)

CONDITION
fair

OWNER
Fillmore County

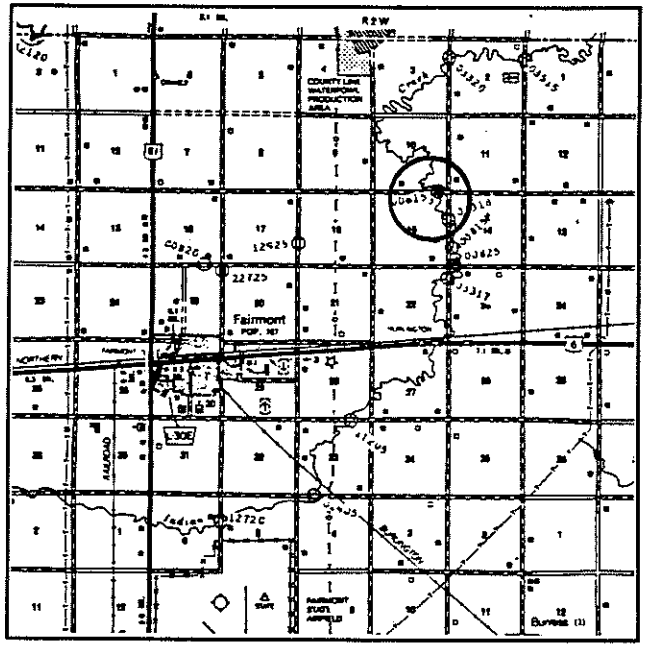
span number:	1	superstructure:	concrete spandrel arch
span length:	25.0'	substructure:	concrete abutments with flared, sloped wingwalls
total length:	25.0'	floor/decking:	gravel over earth fill
roadway wdt.:	20.3'	other features:	beveled stringcourse/coping surmounted by concrete parapet detailed with incised rectangular panels over spandrels on both elevations

This small-scale bridge carries a county road over Indian Creek on the line between Sections 10 and 15, T8N, R2W, Fairmont Township. The structure is composed of a single filled spandrel concrete arch with flared, sloped wingwalls. A beveled stringcourse/coping is set over the arch on both elevations. It is surmounted by solid concrete parapets detailed with incised rectangular panels. A section of parapet is missing in the northwest corner of the bridge. Seams or cracks have formed at each end of the vault, approximately 18 inches from the face of the ring. Each spandrel was apparently poured as a monolithic piece of concrete, and the cracks have formed as the spandrels pulled away from the rest of the vault. Despite these problems, the bridge has fair integrity. On April 22, 1919, the Fillmore County Road and Bridge Committee reported that a bridge was needed on the line between Sections 10 and 15, Fairmont Township. A plan for the bridge dated May 12, 1919, is on file at the Nebraska Department of Roads, and was probably prepared by William Biba, Fillmore County Engineer. The county awarded the contract for this and other bridges on May 22, 1919. Two local contractors, Frank N. Craven of Exeter, and J. W. Kempf of Schickley, were awarded contracts to build the bridges, but it is unclear which man was responsible for the Indian Creek structure.

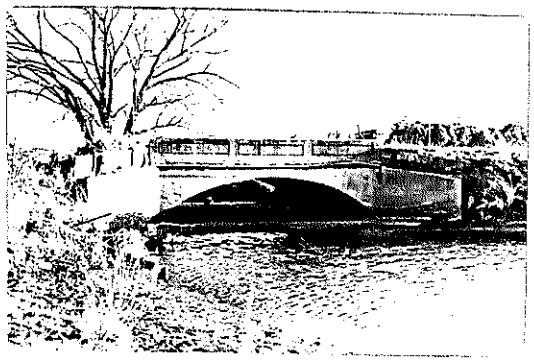
After some initial experimentation with concrete bridge construction in the early 1900s, Fillmore County built concrete arch and slab spans almost exclusively from 1914 through the 1920s. The state engineer appears to have been largely responsible for the county's acceptance of concrete. The state was a major proponent of concrete, believing it to be more durable than steel. Fillmore County relied on state bridge plans until 1918, when it hired William A. Biba as its county engineer. Biba, a graduate of the University of Nebraska, appears to have designed all of the county's bridges until 1931 (using state plans as a model). As one of more than thirty such small-scale concrete structures remaining in the county, the Indian Creek Bridge represents this construction trend.

NAME(S) OF STRUCTURE
Indian Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003000615; Proceedings of the Fillmore County Commissioners, 1903-1920, located in Fillmore County Courthouse, Geneva, Nebraska, refer to the following entries in Book 6: 22 April 1919, p. 336; 22 May 1919, p. 336; "25-Foot Concrete Arch. Sections 10 and 15, Fairmont Twp," 12 May 1919, plan number 613, located in Bridge Division, Nebraska Department of Roads; State Board of Irrigation, **Tenth Biennial Report, 1912-1914**, pp. 231-234; Nebraska Department of Public Works, **Monthly Report** (October 1919): 17; field inspection by Jeffrey A. Hess, 18 April 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C003000810

FILL06

DATE(S) OF CONSTRUCTION
ca.1920

LOCATION
county road over intermittent stream; S13/24, T8N, R4W
1.4 miles north, 0.3 mile west of Grafton; Fillmore County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 19)

CONDITION
poor

OWNER
Fillmore County

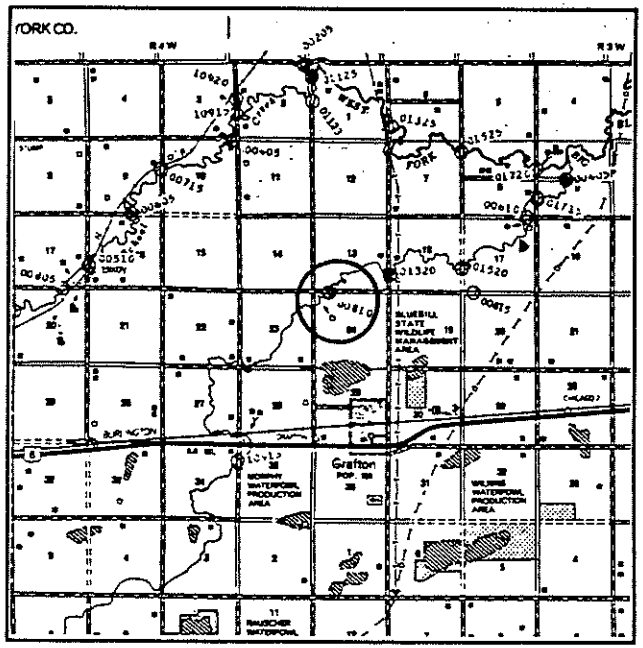
span number:	1	superstructure:	concrete filled spandrel arch
span length:	20.0'	substructure:	concrete abutments with flared, sloped wingwalls
total length:	22.0'	floor/decking:	gravel over earth fill
roadway wdt.:	18.8'	other features:	solid concrete parapets with recessed rectangular panels

This small-scale bridge carries a county road over a small stream between Sections 13 and 24, Grafton Township. The structure is composed of a single filled spandrel concrete arch with flared, sloped wingwalls. The roadway is enclosed by solid concrete parapets detailed with recessed rectangular panels. A section of parapet in the northwest corner of the bridge has broken away, and a crack runs across the west elevation of the arch. Due to these problems, the bridge has poor integrity. No plans have been found for this bridge, and county records provide no specific information. The bridge is somewhat unusual, as it does not have a coping or stringcourse like most of the other concrete bridges in the county. Other than this, this structure is typical of Fillmore County concrete construction from 1914 through the early 1920s, and probably dates to ca.1920.

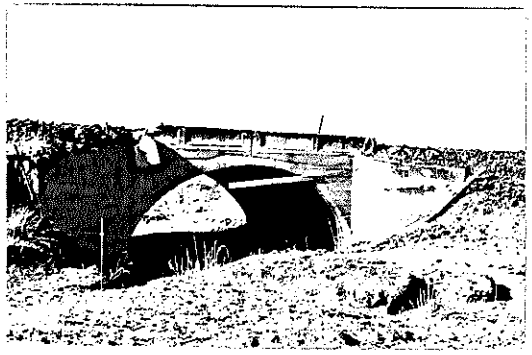
This bridge is typical of many concrete arch bridges built in Fillmore County - and Nebraska - during the 1920s.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003000810; Proceedings of the Fillmore County Commissioners, 1903-1920, located in Fillmore County Courthouse, Geneva, Nebraska; State Board of Irrigation, **Tenth Biennial Report, 1912-1914**, pp. 231-234; Nebraska Department of Public Works, **Monthly Report** (October 1919): 17; field inspection by Jeffrey A. Hess, 18 April 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Thompson Bridge [Indian Creek Bridge] FILL07
NDOR: C003000825

DATE(S) OF CONSTRUCTION
1918

LOCATION
county road over Indian Creek; S14/23, T8N, R2W
0.9 mile north, 2.8 miles east of Fairmont; Fillmore County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 25)

CONDITION
fair

OWNER
Fillmore County

span number:	1	superstructure:	concrete filled spandrel arch
span length:	25.0'	substructure:	concrete abutments with flared, sloped wingwalls
total length:	27.0'	floor/decking:	gravel over earth fill
roadway wdt.:	20.0'	other features:	coping/stringcourse over arch; solid concrete parapets

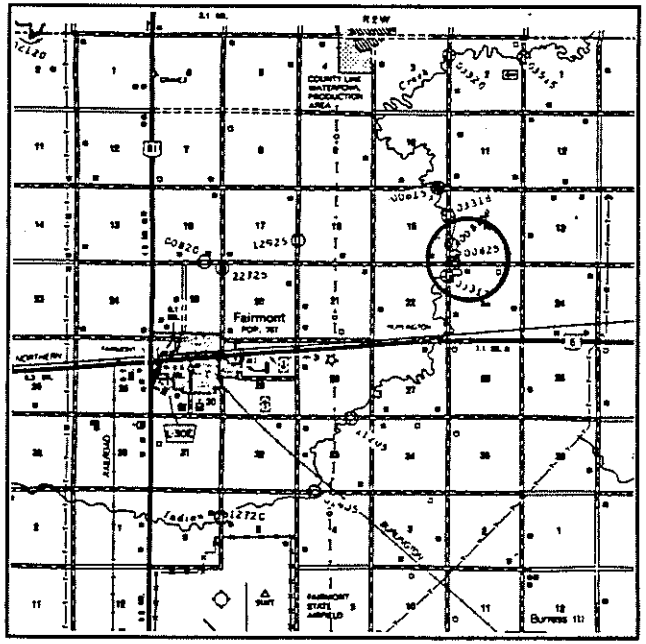
The Thompson Bridge carries a county road over Indian Creek between Sections 14 and 23, T8N, R2W, Fairmont Township. The structure is composed of a single 25-foot, filled spandrel, concrete arch with flared, sloped wingwalls. A stringcourse runs along each elevation, although part of it has broken away on the south side of the bridge. The roadway is enclosed by solid concrete parapets, which appear to be recent additions. Seams or cracks have formed at the ends of the vault, approximately twelve-inches in from the mouth. Each spandrel wall appears to have been poured as a separate, single piece, and the cracks have formed as the wall has pulled away from the arch. Due to the alteration of the parapets, the bridge has poor integrity. The Fillmore County Board opened bids for the Thompson Bridge and several other small-scale spans on May 21, 1918. Frank N. Craven of Exeter NE won the contract for the Thompson Bridge for $1290 and completed it later that year.

After some initial experimentation with concrete bridge construction in the early 1900s, Fillmore County built concrete arch and slab spans almost exclusively from 1914 through the 1920s. The state engineer appears to have been largely responsible for the county's acceptance of concrete. The state was a major proponent of concrete, believing it to be more durable than steel. Fillmore County relied on state bridge plans until 1918, when it hired William A. Biba as its county engineer. Biba, a graduate of the University of Nebraska, appears to have designed all of the county's bridges until 1931 (using state plans as a model). As one of more than thirty such small-scale concrete structures remaining in the county, the Thompson Bridge represents this construction trend. Due to subsequent deterioration, the bridge has lost integrity and is not eligible for the National Register.

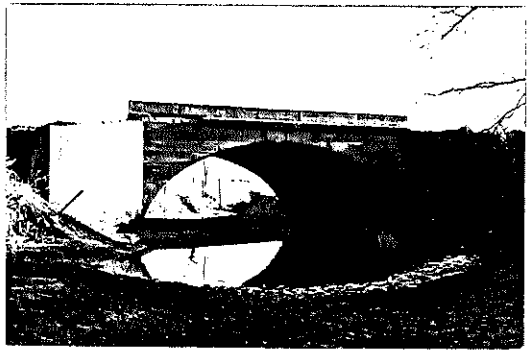
NAME(S) OF STRUCTURE

Thompson Bridge [Indian Creek Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003000825; Proceedings of the Fillmore County Commissioners, 1903-1920, located in Fillmore County Courthouse, Geneva, Nebraska, refer to the following entries in Book 6: 21 May 1918, p. 309; 22 May 1918, p. 309; State Board of Irrigation, **Tenth Biennial Report, 1912-1914**, pp. 231-234; Nebraska Department of Public Works, **Monthly Report** (October 1919): 17; "25-Foot Concrete Arch. Thompson Bridge. Sections 14 and 23, Fairmont Twp," 2 May 1918, plan number 595, located in Bridge Division, Nebraska Department of Roads; field inspection by Jeffrey A. Hess, 15 April 1989.

INVENTORIED BY

Demian Hess

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Big Blue River Bridge
NDOR: C003001125

FILL08

DATE(S) OF CONSTRUCTION
1918

LOCATION
county road over West Fork of Big Blue River; S1/2, T8N, R4W
5 miles north, 1 mile west of Grafton; Fillmore County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 34)

CONDITION
fair

OWNER
Fillmore County

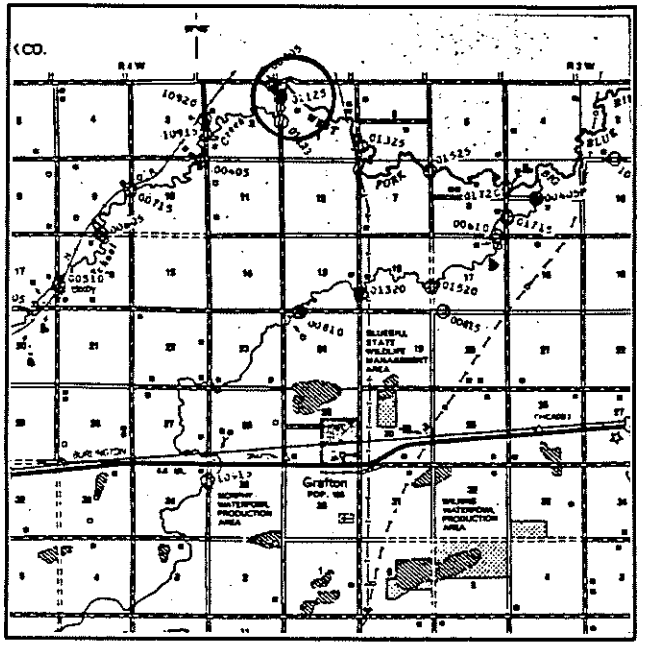
span number:	1	superstructure:	concrete filled spandrel arch
span length:	50.0'	substructure:	concrete abutments with flared sloped wingwalls
total length:	52.0'	floor/decking:	gravel over earth fill
roadway wdt.:	20.0'	other features:	beveled stringcourse/coping, solid concrete parapet with recessed rectangular panels

This bridge carries a county road over the West Fork of the Big Blue River on the line between Sections 1 and 2, T8N, R4W, Grafton Township. The structure is composed of a single filled spandrel, concrete arch with flared, sloped concrete wingwalls. A concrete stringcourse/coping runs over the spandrels on each elevation. The roadway is enclosed by a solid concrete parapet detailed with recessed rectangular panels. The forms for the bridge appear to have settled during construction, and the arch and railings seem to sag in the center. In June 1917 the Fillmore County Board authorized construction of a 40-foot concrete arch on the line between Sections 1 and 2, Grafton Township. It is not clear whether this bridge was ever built, because the road and bridge committee authorized a 50-foot arch on the section line the next year. The state engineer prepared plans for the bridge in early May, and that month the county awarded a contract for its construction to Frank N. Craven of Exeter for $4250. He completed the Big Blue River Bridge later that year.

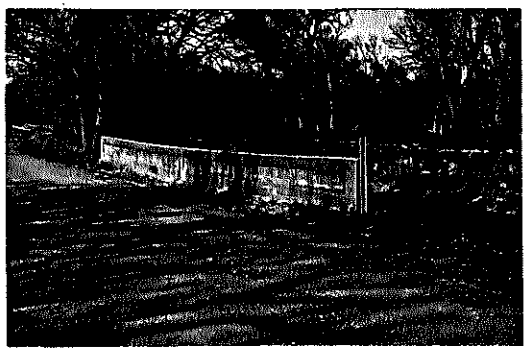
After some initial experimentation with concrete bridge construction in the early 1900s, Fillmore County built concrete arch and slab spans almost exclusively from 1914 through the 1920s. The state engineer appears to have been largely responsible for the county's acceptance of concrete. The state was a major proponent of concrete, believing it to be more durable than steel. Fillmore County relied on state bridge plans until 1918, when it hired William A. Biba as its county engineer. Biba, a graduate of the University of Nebraska, appears to have designed all of the county's bridges until 1931 (using state plans as a model). As one of the more than thirty such small-scale concrete structures remaining in the county, the Big Blue River Bridge represents this construction trend.

NAME(S) OF STRUCTURE
Big Blue River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003001125; Proceedings of the Fillmore County Commissioners, 1903-1920, located in Fillmore County Courthouse, Geneva, Nebraska, refer to the following entries in Book 6: 15 June 1917, p. 285; 21 May 1918, p. 309; State of Nebraska, "Plan For 50-Foot Arch, Sections 1 and 2, Grafton Twp.," 7 May 1918, plan number 509, located in Bridge Division, Nebraska Department of Roads; State Board of Irrigation, **Tenth Biennial Report, 1912-1914**, pp. 231-234; Nebraska Department of Public Works, **Monthly Report** (October 1919): 17; field inspection by Jeffrey A. Hess, 18 April 1989.

INVENTORIED BY	**AFFILIATION**	**DATE**
Demian Hess	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C003001320

FILL09

DATE(S) OF CONSTRUCTION
1926

LOCATION
county road over intermittent stream; S13/18, T8N, R4W/3W
1.7 miles north of Grafton; Fillmore County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 25)

CONDITION
fair

OWNER
Fillmore County

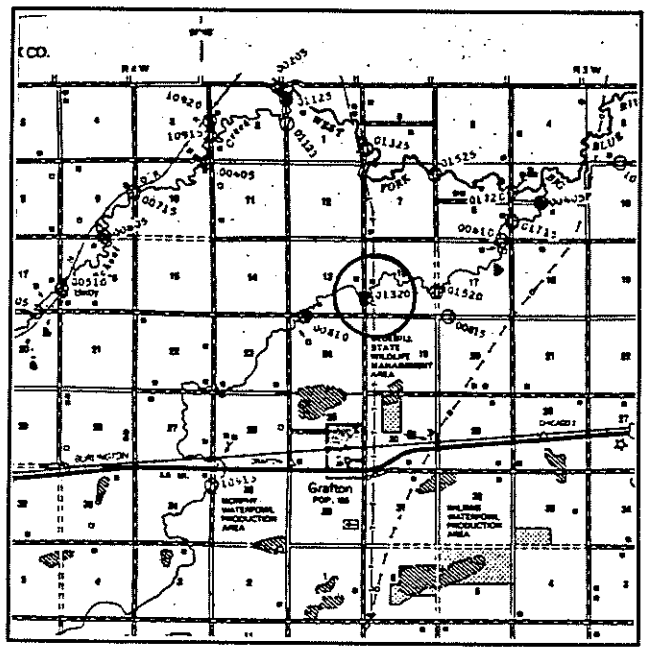
span number:	1	superstructure:	concrete filled spandrel arch
span length:	20.0'	substructure:	concrete abutments with flared, sloped wingwalls
total length:	21.0'	floor/decking:	gravel over earth fill
roadway wdt.:	20.3'	other features:	concrete stringcourse/coping

This bridge carries a county road over a small stream on the line between Section 13, T8N, R4W, Grafton Township, and Section 18, T8N, R3W, West Blue Township. The bridge consists of a single 20-foot, filled spandrel concrete arch. According to a historic photo as well as physical evidence, the roadway was originally enclosed by concrete rails carried by concrete posts. The posts were detailed with recessed, rectangular panels. These railings and posts have been removed. A concrete stringcourse/coping is, however, still visible on each elevation. Plans for this bridge have been located at the Nebraska Department of Roads. Dated January 1926 and signed by William Biba, the Fillmore County Engineer, these delineate the original concrete posts and rails. Although the State of Nebraska used this railing type as early as 1912 (see, for example, plans for the Bayard State Aid Bridge), it was apparently not used in Fillmore county until the mid-1920s (see **FILL11**, **FILL12**, **FILL15** and **FILL30** for examples). Along with its railing, the Big Blue River Bridge has lost a significant degree of physical integrity.

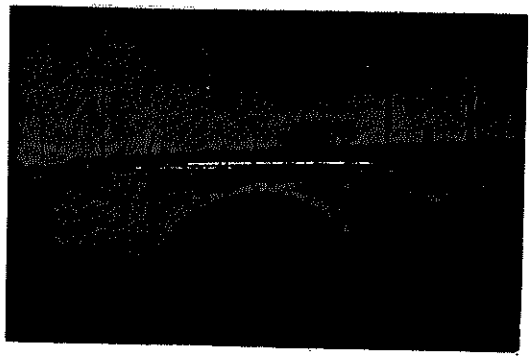
This bridge is typical of concrete arch construction in Nebraska during the 1920s. Due to alterations, the bridge is not eligible for the National Register.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003001320; Proceedings of the Fillmore County Commissioners, 1903-1920, located in Fillmore County Courthouse, Geneva, Nebraska; William A. Biba, "20-Foot Arch, Section 13, Grafton Twp.," 30 January 1926, plan number 629, located in Bridge Division, Nebraska Department of Roads; State Board of Irrigation, **Tenth Biennial Report, 1912-1914**, pp. 231-234; Nebraska Department of Public Works, **Monthly Report** (October 1919): 17; field inspection by Jeffrey A. Hess, 22 April 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge FILL10
NDOR: C003001505

DATE(S) OF CONSTRUCTION
1917

LOCATION
county road over intermittent stream; S31/32, T6N, R3W
2 miles east, 1.7 miles north of Schickley; Fillmore County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 25)

CONDITION
good

OWNER
Fillmore County

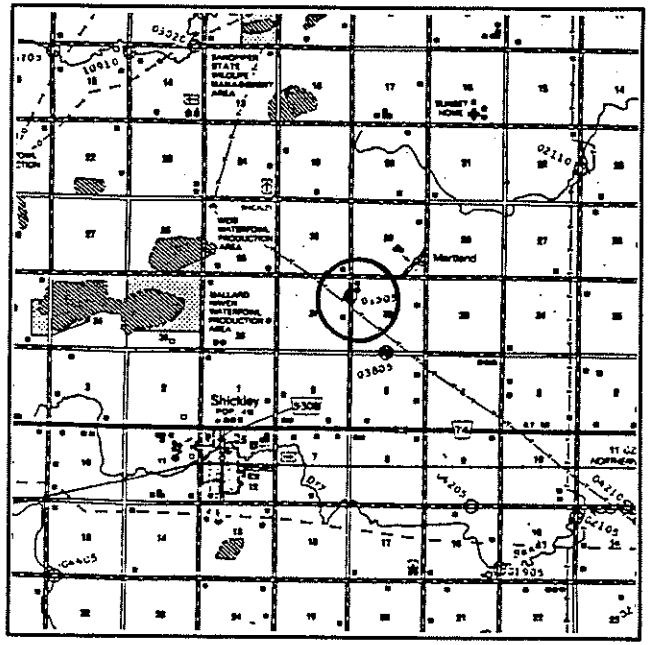
span number:	1	superstructure:	concrete filled spandrel arch
span length:	20.0'	substructure:	concrete abutments with flared, sloped wingwalls
total length:	21.0'	floor/decking:	gravel over earth fill
roadway wdt.:	approx. 20'	other features:	stringcourse/coping, solid concrete parapets with incised rectangular panels

This bridge carries a county road over a small stream on the line between Sections 31 and 32, T6N, R3W, Stanton Township. The structure is composed of a single 20-foot, filled spandrel, concrete arch with flared, sloped wingwalls. A concrete coping/stringcourse runs along each elevation. The roadway is enclosed by solid concrete parapets detailed with incised rectangular panels. According to a local source, the county removed the tops of the parapets to allow wider loads to cross the bridge. Despite the alteration, the ornamental panels are still largely visible. Due to the loss of historic fabric, the bridge has only fair integrity. In 1917 the Fillmore County Road and Bridge Committee recommended building a 20-foot arch on the line between Sections 31 and 32, Stanton Township. On April 17, 1917, the county awarded the construction contract to J.W. Kempf of Schickley NE for $785. The county accepted the completed bridge on December 11, 1917.

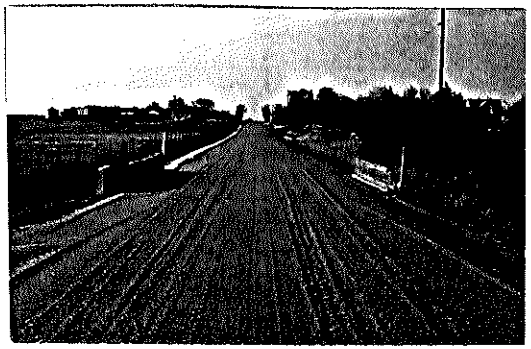
After some initial experimentation with concrete bridge construction in the early 1900s, Fillmore County built concrete arch and slab spans almost exclusively from 1914 through the 1920s. The state engineer appears to have been largely responsible for the county's acceptance of concrete. The state was a major proponent of concrete, believing it to be more durable than steel. Fillmore County relied on state bridge plans until 1918, when it hired William A. Biba as its county engineer. Biba, a graduate of the University of Nebraska, appears to have designed all of the county's bridges until 1931 (using state plans as a model). As one of more than thirty such small-scale concrete structures remaining in the county, this diminutive span represents this construction trend. Due to subsequent deterioration, the bridge has lost integrity and is not eligible for the National Register.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003001505; Proceedings of the Fillmore County Commissioners, 1903-1920, located in Fillmore County Courthouse, Geneva, Nebraska, refer to the following entries in Book 6: February 1917, p. 279; 17 April 1917, p. 280; 11 December 1917, p. 295; Jeffrey A. Hess, interview with Nellie Norris, resident, 22 April 1989; State Board of Irrigation, **Tenth Biennial Report, 1912-1914**, pp. 231-234; Nebraska Department of Public Works, **Monthly Report** (October 1919): 17; field inspection by Jeffrey A. Hess, 22 April 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
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Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Turkey Creek Bridge
NDOR: C003001705

FILL11

DATE(S) OF CONSTRUCTION
1926

LOCATION
county road over Turkey Creek; S32/33, T7N, R3W
3 miles west of Geneva; Fillmore County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 15)

CONDITION
fair

OWNER
Fillmore County

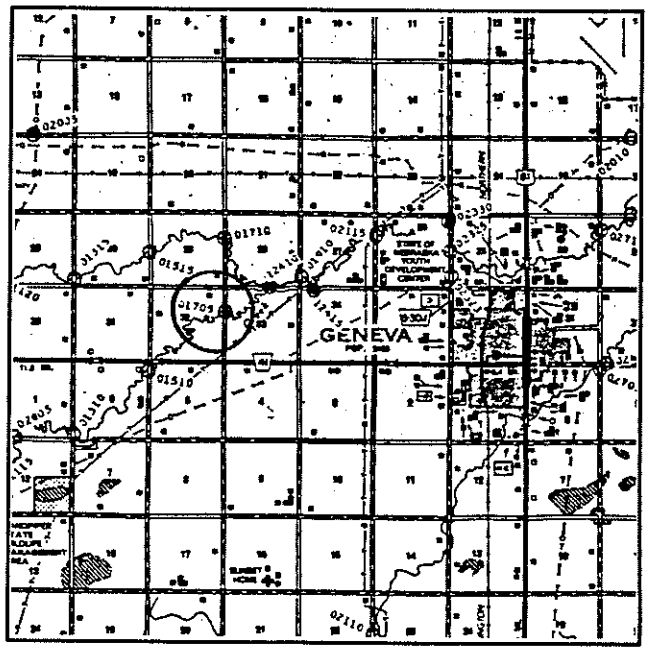
span number:	1	superstructure:	concrete filled spandrel arch
span length:	45.0'	substructure:	concrete abutments with flared, sloped wingwalls
total length:	47.0'	floor/decking:	gravel over earth fill
roadway wdt.:	18.6'	other features:	concrete stringcourse/coping; concrete posts and rails

This small-scale bridge carries a county road over Turkey Creek on the line between Sections 32 and 33, T7N, R3W, Geneva Township. The structure is composed of a single, skewed, filled spandrel concrete arch with flared, sloped wingwalls. A concrete coping/stringcourse runs along the spandrels on both elevation. It is surmounted by concrete rails set on concrete posts. The top rails have been removed. Fillmore County Engineer William Biba designed this bridge in January 1926. Concrete post and rails were used by the state engineer as early as 1912, but the railing-type did not appear in Fillmore County until the mid-1920s (see **FILL09, FILL12, FILL15** and **FILL30** for examples). Due to the removal of part of the railing system, this bridge has only fair integrity.

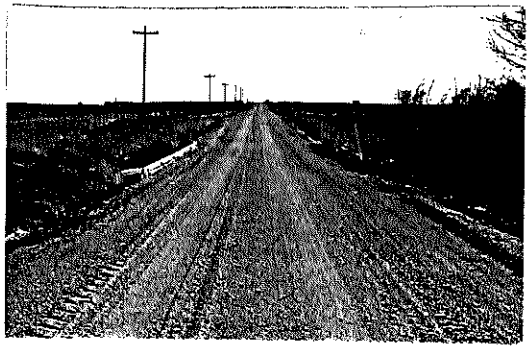
This structure is typical of concrete arch construction in Nebraska during the 1910s and 1920s.

NAME(S) OF STRUCTURE
Turkey Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003001705; Proceedings of the Fillmore County Commissioners, 1903-1920, located in Fillmore County Courthouse, Geneva, Nebraska; State Board of Irrigation, **Tenth Biennial Report**, 1912-1914, pp. 231-234; Nebraska Department of Public Works, **Monthly Report** (October 1919): 17; William A. Biba, "Plan for 45-Foot Skew Arch, Sections 32 and 33, Geneva Township," 18 January 1926, plan number 678, located in Bridge Division, Nebraska Department of Roads; field inspection by Jeffrey A. Hess, 22 April 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge FILL12
NDOR: C003001710

DATE(S) OF CONSTRUCTION
1923

LOCATION
county road over intermittent stream; S28/29, T7N, R3W
3 miles west, 0.8 mile north of Geneva; Fillmore County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 15)

CONDITION
good

OWNER
Fillmore County

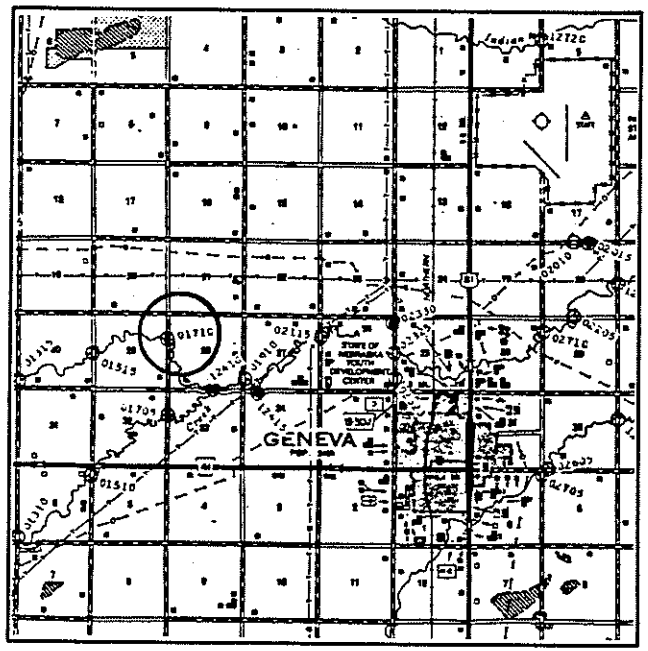
span number:	1	superstructure:	concrete filled spandrel arch
span length:	40.0'	substructure:	concrete abutments with flared, sloped wingwalls
total length:	42.0'	floor/decking:	gravel over earth fill
roadway wdt.:	18.1'	other features:	concrete stringcourse/coping; concrete posts and rails

This small-scale bridge carries a county road over a small stream on the line between Sections 28 and 29, T7N, R3W, Geneva Township. The structure is composed of a single 40-foot, filled spandrel concrete arch. A stringcourse/coping runs above the spandrels on each elevation. Concrete posts detailed with recessed panels are set on the coping and carry two lines of concrete rails. The posts were originally higher and carried more rails, but the tops have been removed. The grade has also been raised nearly to the top of the posts, and plywood retains the roadway fill. Due to the loss of historic fabric, the bridge has only fair integrity. Fillmore County Engineer William Biba's name appears on plans for this bridge, which are dated 8 June 1923. Its builder is unknown.

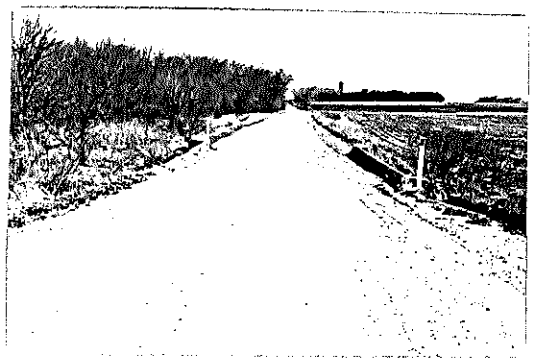
This structure is typical of concrete arch construction in Nebraska during the 1910s and 1920s. Due to alterations, the bridge is not eligible for the National Register.

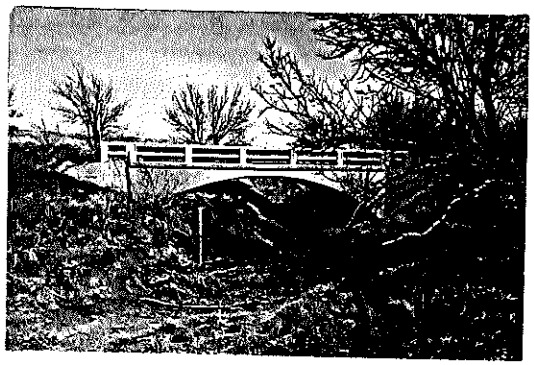
NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003001710; Proceedings of the Fillmore County Commissioners, 1903-1920, located in Fillmore County Courthouse, Geneva, Nebraska; State Board of Irrigation, **Tenth Biennial Report, 1912-1914**, pp. 231-234; Nebraska Department of Public Works, **Monthly Report** (October 1919): 17; William A. Biba, "Plan for 40-Foot Arch With 9-Foot Rise. No. K-E21. Between Sections 28 and 29, T7N, R3W," 8 June 1923, located in Bridge Division, Nebraska Department of Roads; field inspection by Jeffrey A. Hess, 22 April 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge FILL13
NDOR: C003002005

DATE(S) OF CONSTRUCTION
ca.1920

LOCATION
county road over intermittent stream; S13/24, T7N, R4W
4 miles south, 0.5 mile west of Grafton; Fillmore County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 13)

CONDITION
fair

OWNER
Fillmore County

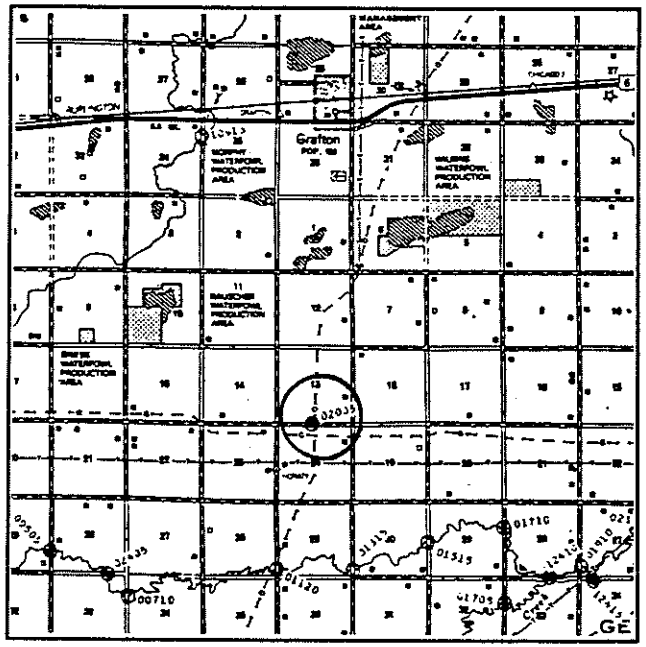
span number:	1	superstructure:	concrete filled spandrel arch
span length:	25.0'	substructure:	concrete abutments with flared, sloped wingwalls
total length:	27.0'	floor/decking:	gravel over earth fill
roadway wdt.:	approx. 18'	other features:	concrete stringcourse/coping

This small-scale bridge carries a county road over a small stream on the line between Sections 13 and 24, T7N, R4W, Bennett Township. The structure is composed of a single span, 25-foot, filled spandrel concrete arch with flared, sloped wingwalls. A concrete stringcourse/coping runs above the spandrels on each elevation. A concrete parapet originally sat on top of the stringcourse, but it has been removed. Due to the loss of historic fabric, the bridge has poor integrity. No plans have been found for this bridge, and county records do not provide a construction date. Its design is typical of concrete bridge construction in the county throughout the 1910s and 1920s, and it probably dates to ca.1920.

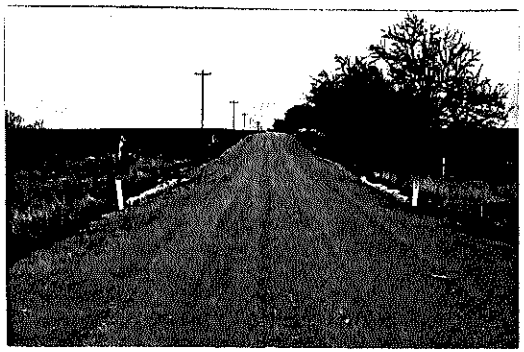
This structure is typical of concrete arch construction in Nebraska during the 1910s and 1920s. Due to alterations, it is not eligible for the National Register.

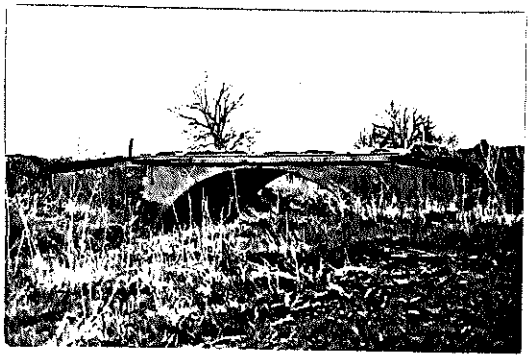
NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003002005; Proceedings of the Fillmore County Commissioners, 1903-1920, located in Fillmore County Courthouse, Geneva, Nebraska; State Board of Irrigation, **Tenth Biennial Report, 1912-1914**, pp. 231-234; Nebraska Department of Public Works, **Monthly Report** (October 1919): 17; field inspection by Jeffrey A. Hess, 22 April 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge FILL14
NDOR: C003002015

DATE(S) OF CONSTRUCTION
1926

LOCATION
county road over intermittent stream; S17/20, T7N, R2W
2.1 miles north, 1.4 miles east of Geneva; Fillmore County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 15)

CONDITION
good

OWNER
Fillmore County

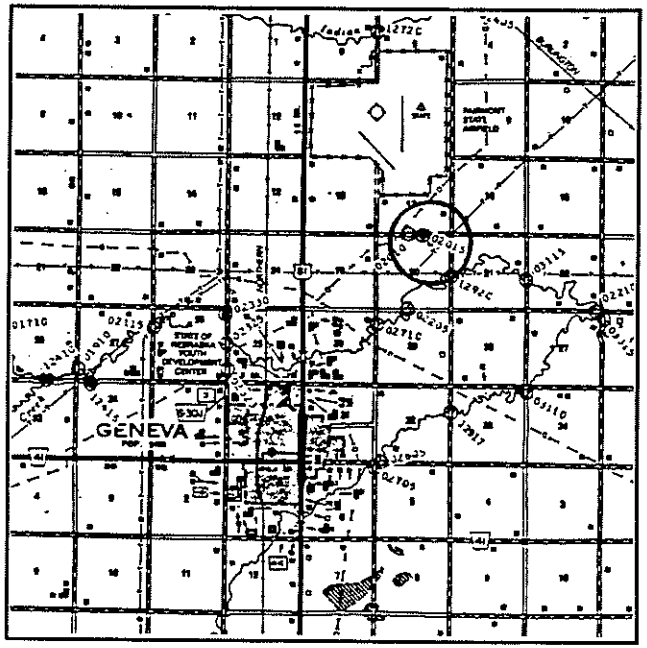
span number:	1	superstructure:	concrete filled spandrel arch
span length:	20.0'	substructure:	concrete abutments with flared, sloped wingwalls
total length:	22.0'	floor/decking:	gravel over earth fill
roadway wdt.:	32.0'	other features:	none

This small-scale bridge carries a county road over a small stream on the line between Sections 17 and 20, T7N, R2W, Madison Township. The structure is composed of a single-span, 20-foot, filled spandrel concrete arch with flared, sloped wingwalls. A seam is visible in the vault, suggesting that the bridge was widened at some time by extending the barrel. The state assigns this bridge a construction date of 1926. If this is correct, the bridge must have been extensively altered, for it is much wider than most bridges of that period. All of the 1920s concrete bridges in Fillmore County were also built with concrete railings, and none are visible on this bridge. Due to the extensive alterations, the bridge has lost its integrity.

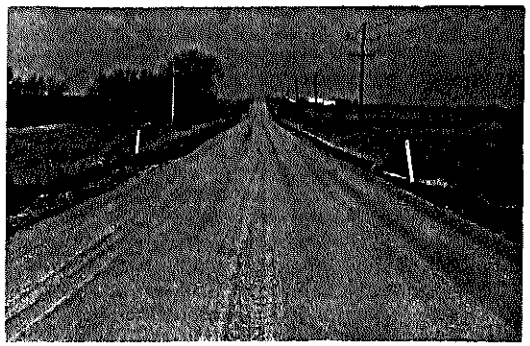
After some initial experimentation with concrete bridge construction in the early 1900s, Fillmore County built concrete arch and slab spans almost exclusively from 1914 through the 1920s. The state engineer appears to have been largely responsible for the county's acceptance of concrete. The state was a major proponent of concrete, believing it to be more durable than steel. Fillmore County relied on state bridge plans until 1918, when it hired William A. Biba as its county engineer. Biba, a graduate of the University of Nebraska, appears to have designed all of the county's bridges until 1931 (using state plans as a model). As one of more than thirty such small-scale concrete structures remaining in the county, this diminutive span represents this construction trend. Due to subsequent deterioration, the bridge has lost integrity and is not eligible for the National Register.

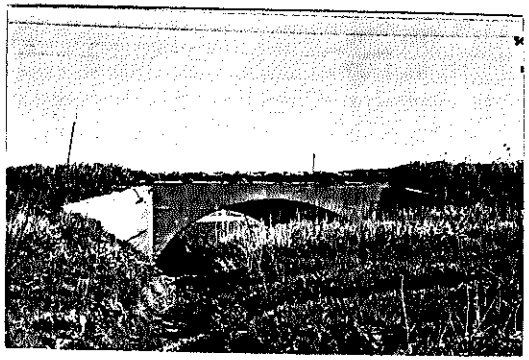
NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003002015; Proceedings of the Fillmore County Commissioners, 1903-1920, located in Fillmore County Courthouse, Geneva, Nebraska; State Board of Irrigation, **Tenth Biennial Report, 1912-1914**, pp. 231-234; Nebraska Department of Public Works, **Monthly Report** (October 1919): 17; field inspection by Jeffrey A. Hess, 22 April 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C003002320

FILL15

DATE(S) OF CONSTRUCTION
ca.1925

LOCATION
county road over intermittent stream; S11/12, T5N, R3W
1.3 miles west, 0.3 mile north of Strang; Fillmore County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 13)

CONDITION
fair

OWNER
Fillmore County

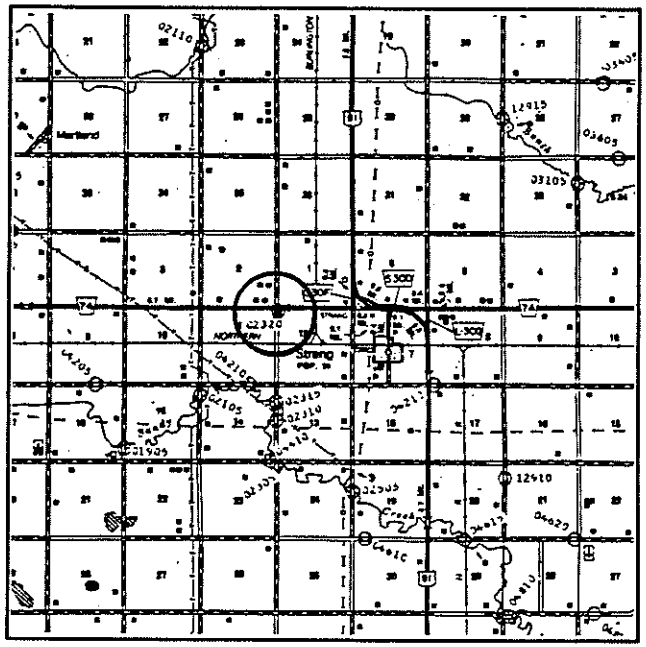
span number:	1	superstructure:	concrete filled spandrel arch
span length:	21.0'	substructure:	concrete abutments with flared, sloped wingwalls
total length:	22.0'	floor/decking:	gravel over earth fill
roadway wdt.:	approx. 19'	other features:	concrete stringcourse/coping

This bridge carries a county road over a small stream between Sections 11 and 12, T5N, R3W, Hamilton Township. The structure is composed of a single-span, 21-foot, filled spandrel concrete arch with flared, sloped wingwalls. A concrete coping/stringcourse runs above the spandrels on each elevation. Exposed rebars in the coping reveal the original locations of concrete posts which once carried concrete rails. Due to the loss of historic fabric, the bridge has poor integrity. State records give a construction date of 1914 for this bridge. However, no post and rail-type railings appear to have been built in Fillmore County before the mid-1920s, and this bridge probably dates to ca.1925 (see Bridge Numbers **FILL09**, **FILL11**, **FILL12** and **FILL30** for examples).

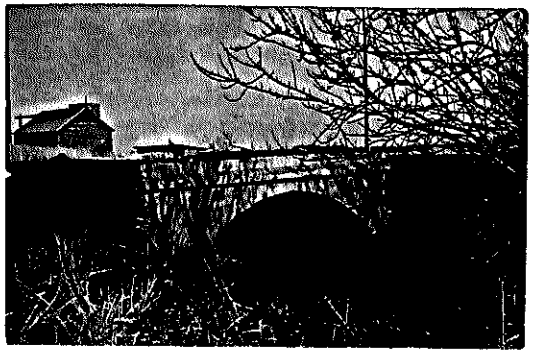
After some initial experimentation with concrete bridge construction in the early 1900s, Fillmore County built concrete arch and slab spans almost exclusively from 1914 through the 1920s. The state engineer appears to have been largely responsible for the county's acceptance of concrete. The state was a major proponent of concrete, believing it to be more durable than steel. Fillmore County relied on state bridge plans until 1918, when it hired William A. Biba as its county engineer. Biba, a graduate of the University of Nebraska, appears to have designed all of the county's bridges until 1931 (using state plans as a model). As one of more than thirty such small-scale concrete structures remaining in the county, this diminutive span represents this construction trend. Due to subsequent deterioration, the bridge has lost integrity and is not eligible for the National Register.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003002320; Proceedings of the Fillmore County Commissioners, 1903-1920, located in Fillmore County Courthouse, Geneva, Nebraska; State Board of Irrigation, **Tenth Biennial Report**, 1912-1914, pp. 231-234; Nebraska Department of Public Works, **Monthly Report** (October 1919): 17; field inspection by Jeffrey A. Hess, 21 and 22 May 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Davis Bridge
NDOR: C003002330

FILL16

DATE(S) OF CONSTRUCTION
1920

LOCATION
county road over intermittent stream; S25/26, T7N, R3W
0.8 mile north of Geneva; Fillmore County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 15)

CONDITION
good

OWNER
Fillmore County

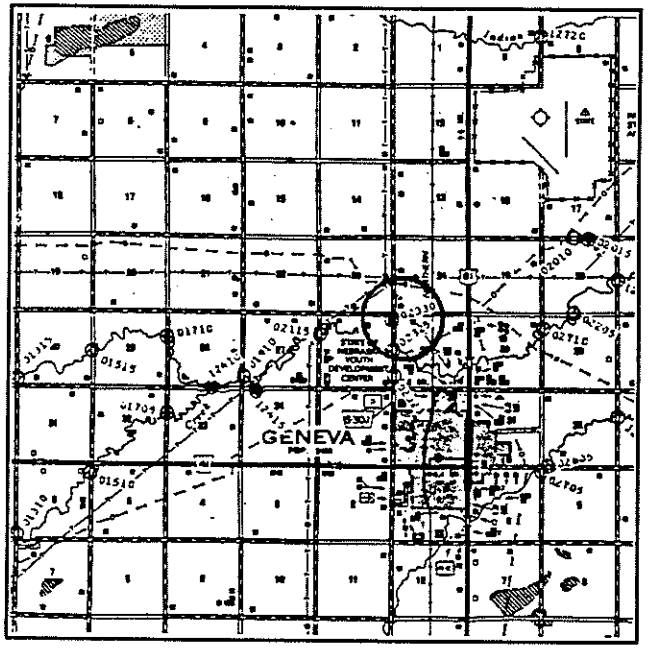
span number:	1	superstructure:	concrete filled spandrel arch
span length:	30.0'	substructure:	concrete abutments with flared, sloped wingwalls
total length:	31.0'	floor/decking:	gravel over earth fill
roadway wdt.:	approx. 20'	other features:	concrete coping/stringcourse; concrete parapet with incised rectangular panels

The Davis Bridge carries a county road over a small stream on the line between Sections 25 and 26, T7N, R3W, Geneva Township. The structure is composed of a single-span, 30-foot, filled spandrel concrete arch with flared, sloped wingwalls. A concrete stringcourse/coping runs along the spandrels on each elevation. It is surmounted by solid concrete parapets detailed with incised rectangular panels. The north end of the east parapet has been replaced by a plain concrete wall. The northwest corner of the west parapet has broken off. Seams or cracks have also formed at the ends of the vault. The spandrel walls appear to have been poured separately, and the cracks have formed as the spandrels pulled away from the arch. Due to the loss of historic fabric in the railings, the bridge has only fair integrity. On June 15, 1920, the Fillmore County Road and Bridge Committee recommended that the Davis Bridge be built, either as a 30-foot concrete arch or a 30-foot I-beam span. County engineer William Biba completed plans for the bridge on July 3rd. County records do not indicate who received the contract, but the board accepted the newly completed span in December 1920.

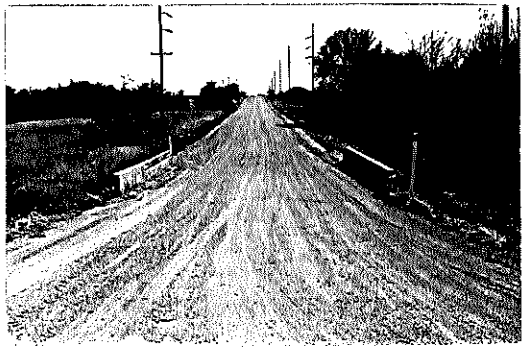
After some initial experimentation with concrete bridge construction in the early 1900s, Fillmore County built concrete arch and slab spans almost exclusively from 1914 through the 1920s. The state engineer appears to have been largely responsible for the county's acceptance of concrete. The state was a major proponent of concrete, believing it to be more durable than steel. Fillmore County relied on state bridge plans until 1918, when it hired William A. Biba as its county engineer. Biba, a graduate of the University of Nebraska, appears to have designed all of the county's bridges until 1931 (using state plans as a model). As one of more than thirty such small-scale concrete structures remaining in the county, the Davis Bridge represents this construction trend. Due to subsequent deterioration, the bridge has lost integrity and is not eligible for the National Register.

NAME(S) OF STRUCTURE
Davis Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003002330; Proceedings of the Fillmore County Commissioners, 1903-1920, located in Fillmore County Courthouse, Geneva, Nebraska, see the following entries in Book 6: 15 June 1920, p. 369; 14 December 1920, p. 383; William A. Biba, "30-Foot Concrete Arch. Davis Bridge. Sections 25 and 26, Geneva Township," 3 July 1920, plan number 649, located in Bridge Division, Nebraska Department of Roads; State Board of Irrigation, **Tenth Biennial Report, 1912-1914**, pp. 231-234; Nebraska Department of Public Works, **Monthly Report** (October 1919): 17; field inspection by Jeffrey A. Hess, 22 April 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge FILL17
NDOR: C003002405

DATE(S) OF CONSTRUCTION
1922

LOCATION
county road over intermittent stream; S28/33, T7N, R4W
0.1 mile north, 8.2 miles west of Geneva; Fillmore County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 21)

CONDITION
good

OWNER
Fillmore County

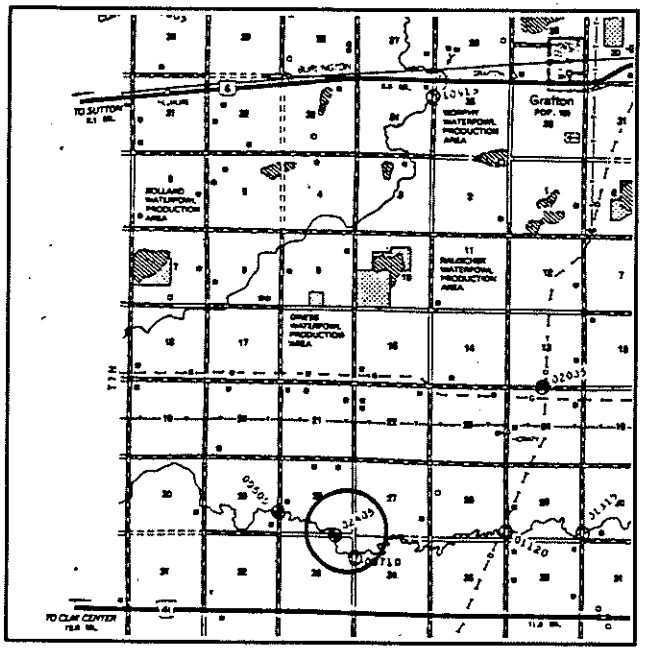
span number:	1	superstructure:	concrete filled spandrel arch
span length:	20.0'	substructure:	concrete abutments with flared, sloped wingwalls
total length:	23.0'	floor/decking:	gravel over earth fill
roadway wdt.:	approx. 17'	other features:	concrete stringcourse/coping; concrete parapet with recessed rectangular panels

This bridge carries an unpaved county road over a small stream on the line between Sections 28 and 33, T7N, R4W, Bennett Township. The structure is composed of a single-span, 20-foot, filled spandrel concrete arch with flared, sloped wingwalls. A stringcourse/coping runs above the spandrels on either elevation. It is surmounted by a concrete parapet detailed with recessed rectangular panels. The bridge is unaltered and has excellent integrity. As indicated by the construction drawings, Fillmore County Engineer William Biba designed this bridge in May 1922. Unfortunately, county records do not indicate who received the contract to build the structure.

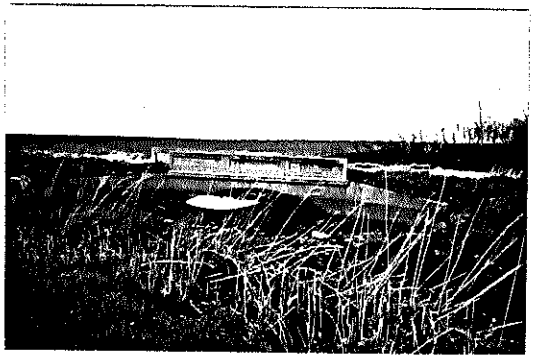
This structure is typical of concrete arch construction in Nebraska during the 1910s and 1920s. With its construction history largely undocumented, however, it is not one of the more noteworthy examples of its type.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003002405; Proceedings of the Fillmore County Commissioners, 1903-1920, located in Fillmore County Courthouse, Geneva, Nebraska; William A. Biba, "Plan for 20-Foot Arch, N-241, Between Sections 28 and 33, Bennett Township," 22 May 1922, located in Bridge Division, Nebraska Department of Roads; State Board of Irrigation, **Tenth Biennial Report, 1912-1914**, pp. 231-234; Nebraska Department of Public Works, **Monthly Report** (October 1919): 17; field inspection by Jeffrey A. Hess, 22 April 1989.

INVENTORIED BY
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AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Kohler Bridge
NDOR: C003002610

FILL18

DATE(S) OF CONSTRUCTION
1920

LOCATION
county road over intermittent stream; S32/5, T7N/6N, R1W
1.4 miles north, 3.9 miles west of Milligan; Fillmore County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 27)

CONDITION
good

OWNER
Fillmore County

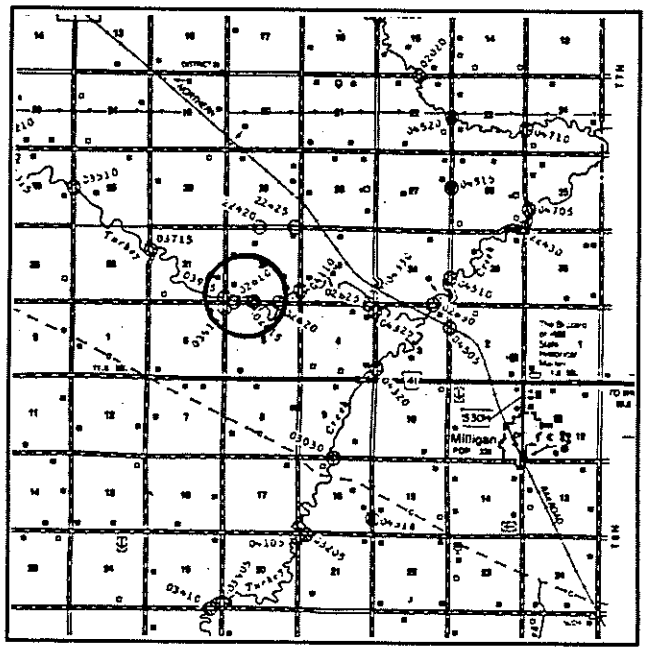
span number:	1	superstructure:	concrete filled spandrel arch
span length:	25.0'	substructure:	concrete abutments with flared, sloped wingwalls
total length:	28.0'	floor/decking:	gravel over earth fill
roadway wdt.:	approx. 20'	other features:	concrete stringcourse/coping; concrete parapet with incised rectangular panels; channel posts and angle rails attached to parapet

The Kohler Bridge carries a county road over a stream on the line between Section 33, T7N, R1W, Liberty Township, and Section 5, T6N, R1W, Glengary Township. The structure is composed of a single-span, 25-foot, filled spandrel, concrete arch with flared, sloped wingwalls. A concrete stringcourse/coping runs above the spandrels on each elevation. The roadway is enclosed by concrete parapets detailed with incised rectangular panels. Channel posts with angle rails are also fastened to the parapets, and appear to be later additions. Seams or cracks have developed near the ends of the vault, and seem to have formed as the spandrel walls have pulled away from the arch ring. As indicated by the construction drawings, Fillmore County Engineer William Biba designed the Kohler Bridge in 1920. The county road and bridge committee first recommended building the Kohler Bridge in April 1919. No action was taken however, and the committee recommended the bridge again in 1920. On October 9, 1920, the County Board accepted the finished bridge, noting that it had been constructed by Frank N. Craven of Exeter, Nebraska. The bridge appears to be largely unaltered and has good integrity.

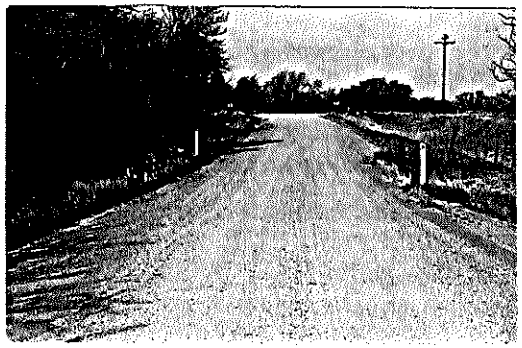
After some initial experimentation with concrete bridge construction in the early 1900s, Fillmore County built concrete arch and slab spans almost exclusively from 1914 through the 1920s. The state engineer appears to have been largely responsible for the county's acceptance of concrete. The state was a major proponent of concrete, believing it to be more durable than steel. Fillmore County relied on state bridge plans until 1918, when it hired William A. Biba as its county engineer. Biba, a graduate of the University of Nebraska, appears to have designed all of the county's bridges until 1931 (using state plans as a model). As one of more than thirty such small-scale concrete structures remaining in the county, the Kohler Bridge represents this construction trend.

NAME(S) OF STRUCTURE
Kohler Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003002610; Proceedings of the Fillmore County Commissioners, 1903-1920, located in Fillmore County Courthouse, Geneva, Nebraska, see the following entries in Book 6: 22 April 1919, p. 336; 15 June 1920, p. 369; 19 October 1920, p. 380; William A. Biba, "25-Foot Concrete Arch, North of Section 5, Glengary Township," no date, plan number 650, located in Bridge Division, Nebraska Department of Roads; State Board of Irrigation, **Tenth Biennial Report, 1912-1914**, pp. 231-234; Nebraska Department of Public Works, **Monthly Report** (October 1919): 17; field inspection by Jeffrey A. Hess, 22 April 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Turkey Creek Bridge
NDOR: C003003030

FILL19

DATE(S) OF CONSTRUCTION
1919

LOCATION
county road over South Fork of Turkey Creek; S9/16, T6N, R1W
2.5 miles west of Milligan; Fillmore County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 28)

CONDITION
good

OWNER
Fillmore County

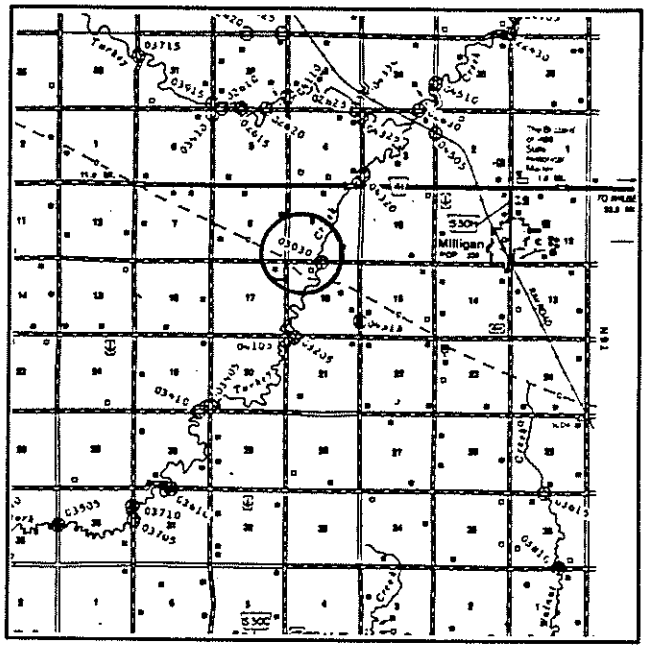
span number:	1	superstructure:	concrete filled spandrel arch
span length:	40.0'	substructure:	concrete abutments with flared, sloped wingwalls
total length:	42.0'	floor/decking:	gravel over earth fill
roadway wdt.:	20.4'	other features:	beveled stringcourse/coping; concrete parapets with flanking concrete posts and raised rectangular panels

This bridge carries a county road over the South Fork of Turkey Creek on the line between Sections 9 and 16, T6N, R1W, Glengary Township. The structure is composed of a single-span, 40-foot, filled spandrel concrete arch with flared, sloped wingwalls. A concrete coping runs above the spandrels on each elevation. It is capped by a concrete parapet detailed with raised rectangular panels and a concrete coping. A concrete post with a coping stands at each end of the parapet. The spandrel walls appear to have settled, creating cracks or seams at either end of the vault. Except for these seams, the bridge is in good condition and has good integrity. The Fillmore County Road and Bridge Committee recommended building a bridge on the line between Sections 9 and 16, Glengary Township, in April 1919. Plans for the bridge dated April 1919 have been located at the Nebraska Department of Roads, and were probably prepared by county engineer William Biba. Unfortunately, it is not known who was awarded the contract to build the bridge.

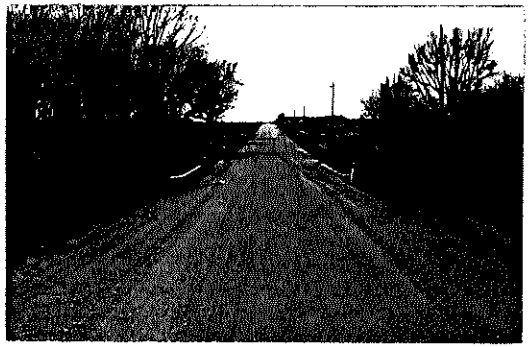
After some initial experimentation with concrete bridge construction in the early 1900s, Fillmore County built concrete arch and slab spans almost exclusively from 1914 through the 1920s. The state engineer appears to have been largely responsible for the county's acceptance of concrete. The state was a major proponent of concrete, believing it to be more durable than steel. Fillmore County relied on state bridge plans until 1918, when it hired William A. Biba as its county engineer. Biba, a graduate of the University of Nebraska, appears to have designed all of the county's bridges until 1931 (using state plans as a model). As one of more than thirty such small-scale concrete structures remaining in the county, the Turkey Creek Bridge represents this construction trend.

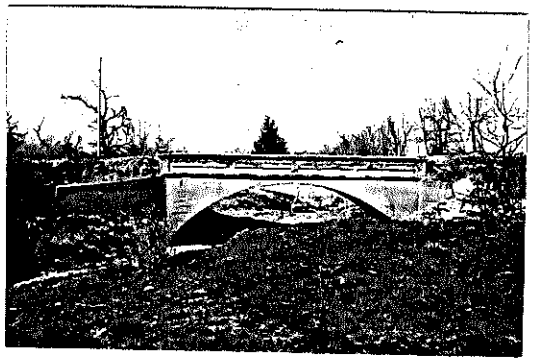
NAME(S) OF STRUCTURE
Turkey Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C0030; Proceedings of the Fillmore County Commissioners, 1903-1920, located in Fillmore County Courthouse, Geneva, Nebraska, see 22 April 1919, Book 6, p. 336; State Board of Irrigation, **Tenth Biennial Report, 1912-1914**, pp. 231-234; Nebraska Department of Public Works, **Monthly Report** (October 1919): 17; "40-Foot Concrete Arch, Sections 9 and 16, Glengary Township," May 1919, plan number 610, located in Bridge Division, Nebraska Department of Roads; field inspection by Jeffrey A. Hess, 22 April 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Turkey Creek Bridge FILL20
NDOR: C003003505

DATE(S) OF CONSTRUCTION
1908

LOCATION
county road over South Fork of Turkey Creek; S35/36, T6N, R2W
4.3 miles east, 1.8 miles north of Strang; Fillmore County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 35)

CONDITION
good

OWNER
Fillmore County

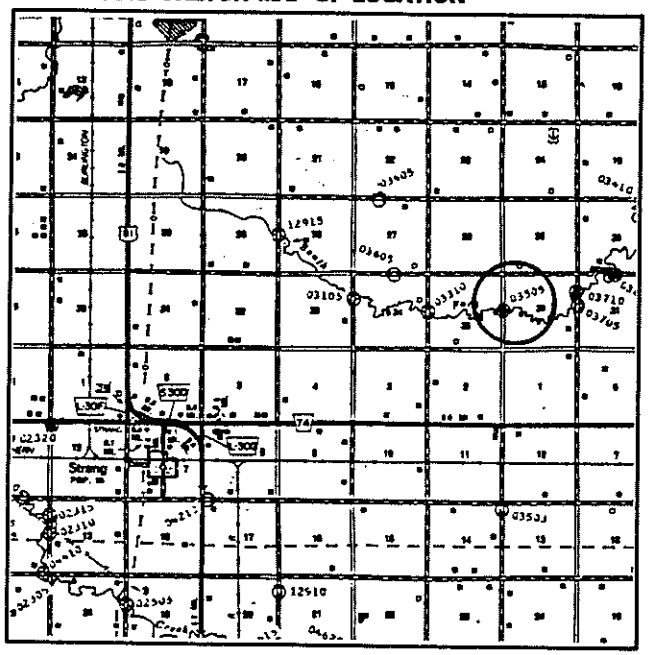
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt half-hip pony truss
span length:	50.0'	substructure:	steel H-pile abutments with plank back and wingwalls
total length:	50.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	15.6'	other features:	upper chord: 2 channels with cover plate and battens; bottom chord: 2 square eyerods; vertical: 4 angles with battens; diagonal: 2 square eyerods; counter: circular eyerod with turnbuckle; bottom lateral: cross-braced circular-section eyerods; floor beam: I-beam, hung from lower chord pins by U-bolts; railing: channel rails with angle posts

This truss carries a county road over the South Fork of Turkey Creek on the line between Sections 35 and 36, T6N, R2W, Chelsea Township. The bridge is a single-span, pinned Pratt half-hip pony truss. The bridge rests on H-pile abutments and appears to be unaltered. On April 14, 1908, the Fillmore County Board ordered the construction of a "soft steel bridge" in Township 6, Range 2, east line, southeast 1/4 Section 35. The Standard Bridge Company constructed this 50-foot pony truss bridge as part of its annual contract. The bridge is virtually identical to another half-hip Pratt pony truss in the county which was also built in 1908 (**FILL21**). This is one of only four steel bridges still existing which date to the county's initial period of steel bridge construction.

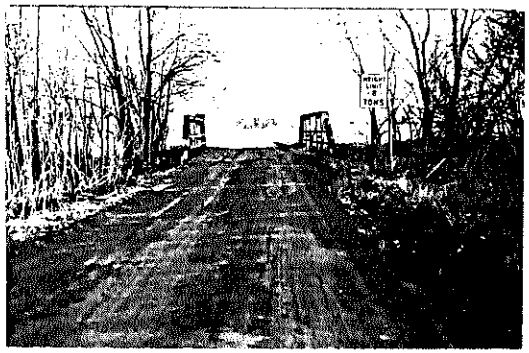
The Standard Bridge Company, like many midwestern bridge erectors, marketed the Pratt half-hip pony truss extensively in the early 1900s. Lacking a vertical at the hip connection, it was slightly lighter - and thus cheaper to fabricate - than the standard Pratt truss. The state engineer's office did not adopt the half-hip design as a state standard, however, and as the counties began using the state standards increasingly in the mid-1910s, erection of half-hip ponies decreased rapidly. Nevertheless, numerous Pratt half-hip trusses remain in use on Nebraska's secondary roads today. With its H-pile substructure, the Turkey Creek Bridge stands out as a prototypical Standard Bridge Company structure.

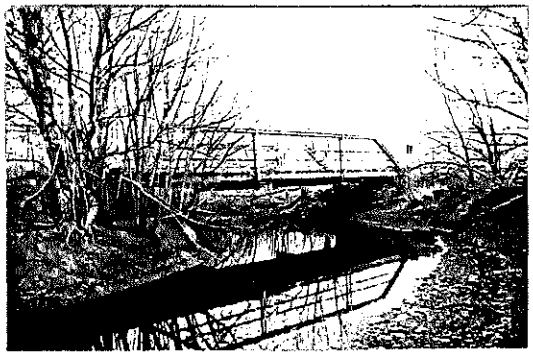
NAME(S) OF STRUCTURE
Turkey Creek Bridge

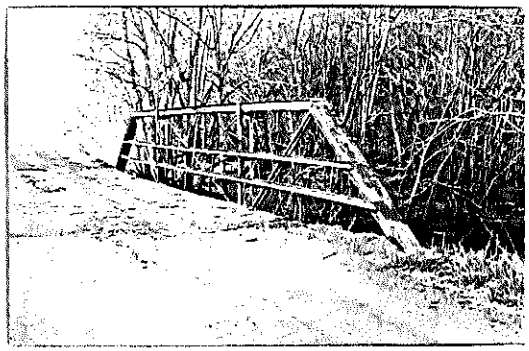
PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP







SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003003505; Proceedings of the Fillmore County Commissioners, 1903-1920, located in Fillmore County Courthouse, Geneva, Nebraska, refer to 14 April 1908, Book 5, p. 511; Fillmore County Bridge Record, Book 1, pp. 290, 292, located in Fillmore County Courthouse; State Board of Irrigation, **Tenth Biennial Report**, 1912-1914, pp. 231-234; Nebraska Department of Public Works, **Monthly Report** (October 1919): 17; field inspection by Jeffrey A. Hess, 21 April 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Turkey Creek Bridge
NDOR: C003003610

FILL21

DATE(S) OF CONSTRUCTION
1908

LOCATION
county road over South Fork of Turkey Creek; S30/31, T6N, R1W
2.3 miles north, 1 mile west of Ohiowa; Fillmore County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 26)

CONDITION
poor

OWNER
Fillmore County

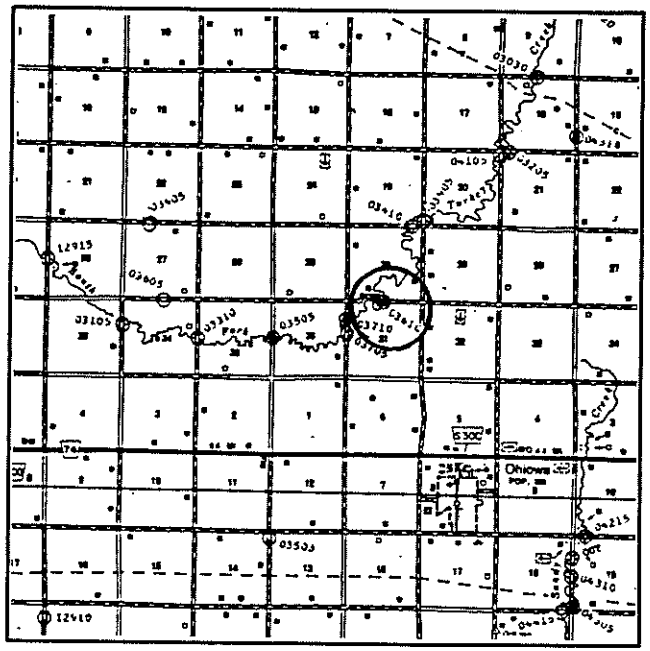
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt half-hip pony truss
span length:	40.0'	substructure:	concrete abutments with flared, sloped wingwalls; steel pile bents
total length:	40.0'	floor/decking:	wood deck over I-beam stringers
roadway wdt.:	15.9'	other features:	upper chord: 2 channels with cover plate and battens; bottom chord: 2 square eyerods; vertical: 4 angles with battens; diagonal: 2 square eyerods; bottom lateral: cross-braced circular eyerods; floor beam: I-beam connected to lower chord pins by means of U-bolts; railing: channel rails on angle posts

This truss carries a county road over the South Fork of Turkey Creek on the line between Sections 30 and 31, T6N, R1W, Glengary Township. As originally built by the Standard Bridge Company in 1908, the bridge consisted of a single-span, pinned Pratt half-hip pony truss. It is virtually identical to another half-hip Pratt pony truss built in the same year and still standing in the county (**FILL20**). At some time, however, steel pile bents were constructed beneath each floor beam. The truss no longer plays a structural role, and in effect, the bridge is a three-span stringer. Due to this alteration, the bridge has poor integrity.

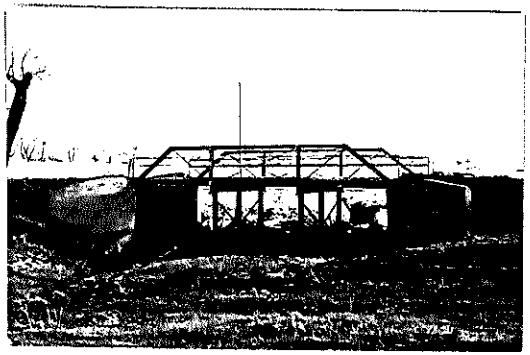
This bridge no longer has structural integrity and is not eligible for the National Register.

NAME(S) OF STRUCTURE
Turkey Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003003610; Proceedings of the Fillmore County Commissioners, 1903-1920, located in Fillmore County Courthouse, Geneva, Nebraska, see 14 April 1908, Book 5, p. 511; Fillmore County Bridge Record, Book 1, pp. 258, 263; State Board of Irrigation, **Tenth Biennial Report, 1912-1914**, pp. 231-234; Nebraska Department of Public Works, **Monthly Report** (October 1919): 17; field inspection by Jeffrey A. Hess, 21 April 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Turkey Creek Bridge
NDOR: C003003710

FILL22

DATE(S) OF CONSTRUCTION
1917

LOCATION
county road over South Fork of Turkey Creek; S36/31, T6N, R2W/1W
~~1.4 miles west, 2 miles north~~; Fillmore County, Nebraska
2.9 mi NW Ohiowa

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 34)

CONDITION
good

OWNER
Fillmore County

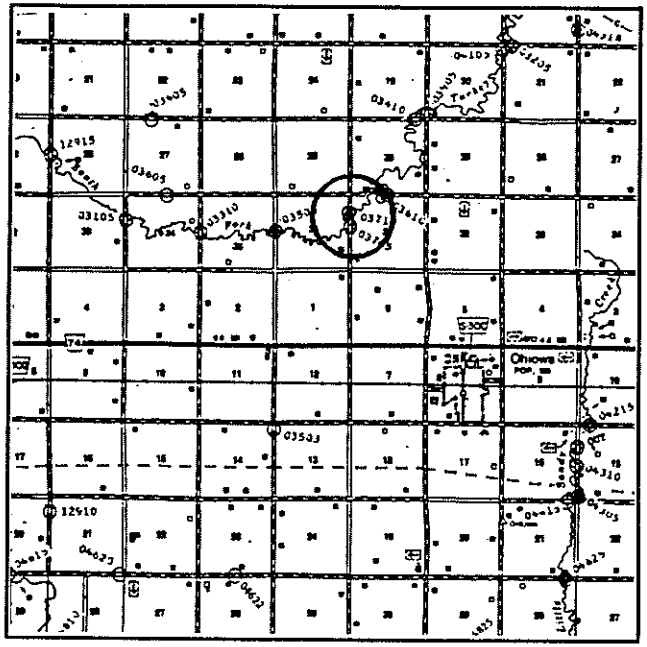
span number:	1	superstructure:	concrete filled spandrel arch
span length:	40.0'	substructure:	concrete abutments with flared, sloped wingwalls
total length:	42.0'	floor/decking:	gravel over earth fill
roadway wdt.:	approx. 20'	other features:	concrete coping/stringcourse; concrete parapets with recessed rectangular panels

This small-scale bridge carries a county road over the South Fork of Turkey Creek on the line between Section 36, T6N, R2W, Chelsea Township, and Section 31, T6N, R1W, Glengary Township. The bridge is composed of a single-span, 40-foot, filled spandrel concrete arch with flared, sloped wingwalls. A concrete stringcourse/coping runs on each elevation. It is surmounted by a concrete parapet detailed with recessed rectangular panels. The parapet continues to the mid-point of the wingwalls. Seams or cracks are visible at the ends and mid-point of the vault, and apparently indicate the sections in which the bridge was poured. In February 1917, the Fillmore County Road and Bridge Committee recommended building a bridge between Section 36, Chelsea Township, and Section 31, Glengary Township. On April 17, 1917, Frank N. Craven of Exeter won the contract to build the bridge for $1,590. In December the county board accepted the bridge and authorized full payment. The structure appears to be unaltered and has retained a high degree of integrity.

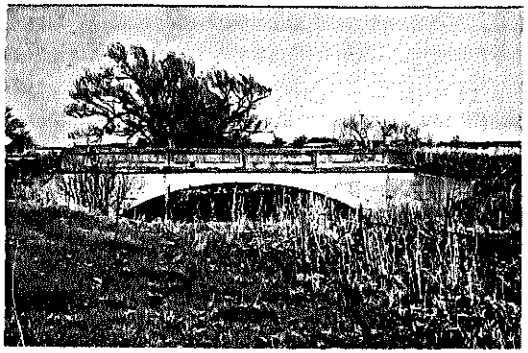
After some initial experimentation with concrete bridge construction in the early 1900s, Fillmore County built concrete arch and slab spans almost exclusively from 1914 through the 1920s. The state engineer appears to have been largely responsible for the county's acceptance of concrete. The state was a major proponent of concrete, believing it to be more durable than steel. Fillmore County relied on state bridge plans until 1918, when it hired William A. Biba as its county engineer. Biba, a graduate of the University of Nebraska, appears to have designed all of the county's bridges until 1931 (using state plans as a model). As one of more than thirty such small-scale concrete structures remaining in the county, the Turkey Creek Bridge represents this construction trend.

NAME(S) OF STRUCTURE
Turkey Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003003710; Proceedings of the Fillmore County Commissioners, 1903-1920, located in Fillmore County Courthouse, Geneva, Nebraska, refer to the following entries in Book 6: February 1917, p. 279; 17 April 1917, p. 280; 11 December 1917, p. 295; State Board of Irrigation, **Tenth Biennial Report, 1912-1914**, pp. 231-234; Nebraska Department of Public Works, **Monthly Report** (October 1919): 17; field inspection by Jeffrey A. Hess, 22 April 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
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Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge FILL23
NDOR: C003003805

DATE(S) OF CONSTRUCTION
ca.1920

LOCATION
county road over intermittent stream; S5/32, T5N/6N, R3W
1.3 miles north, 2 miles east of Schickley; Fillmore County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 17)

CONDITION
good

OWNER
Fillmore County

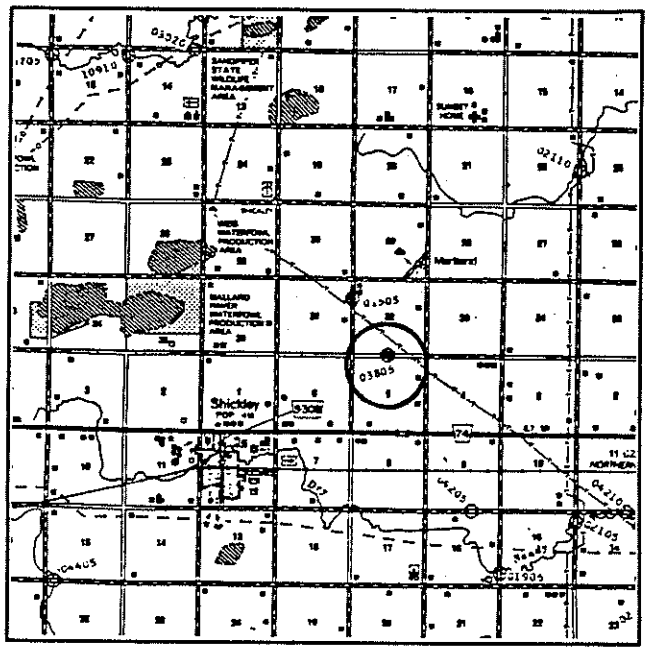
span number:	1	superstructure:	concrete filled spandrel arch
span length:	20.0'	substructure:	concrete abutments on flared, sloped wingwalls
total length:	22.0'	floor/decking:	gravel over earth fill
roadway wdt.:	approx. 19'	other features:	stringcourse/coping; concrete parapet with incised rectangular panels

This bridge carries a county road over a stream on the line between Section 5, T5N, R3W, Hamilton Township, and Section 32, T6N, R3W, Stanton Township. The structure is composed of a single-span, 20-foot, filled spandrel concrete arch with flared, sloped wingwalls. A stringcourse/coping runs over the spandrels and to the approximate mid-points of the wings. The coping is surmounted by a concrete parapet detailed with incised rectangular panels. A concrete slab or floor is visible beneath the arch. County records do not provide a construction date, but the bridge's design is consistent with ca.1920.

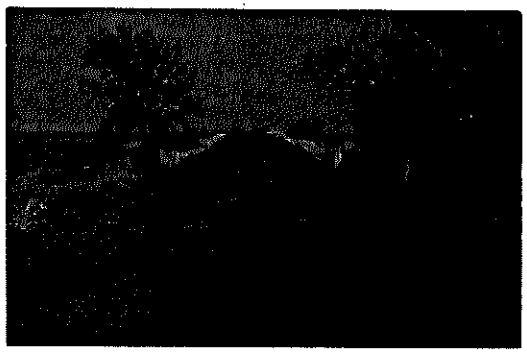
This structure is typical of concrete arch construction in Nebraska during the 1910s and 1920s.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003003805; Proceedings of the Fillmore County Commissioners, 1903-1920, located in Fillmore County Courthouse, Geneva, Nebraska; State Board of Irrigation, **Tenth Biennial Report**, 1912-1914, pp. 231-234; Nebraska Department of Public Works, **Monthly Report** (October 1919): 17; field inspection by Jeffrey A. Hess, 22 April 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Langhorst Bridge [Walnut Creek Bridge] FILL24
NDOR: C003003810

DATE(S) OF CONSTRUCTION
1919

LOCATION
county road over Walnut Creek; S1, T5N, R1W/S36, T6N, R1W
1.3 miles north, 4 miles east of Ohiowa; Fillmore County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 25)

CONDITION
good

OWNER
Fillmore County

span number:	1	superstructure:	concrete filled spandrel arch
span length:	20.0'	substructure:	concrete abutments with flared sloped wingwalls
total length:	22.0'	floor/decking:	gravel over earth fill
roadway wdt.:	approx. 20'	other features:	stringcourse/coping; concrete parapet with incised rectangular panels

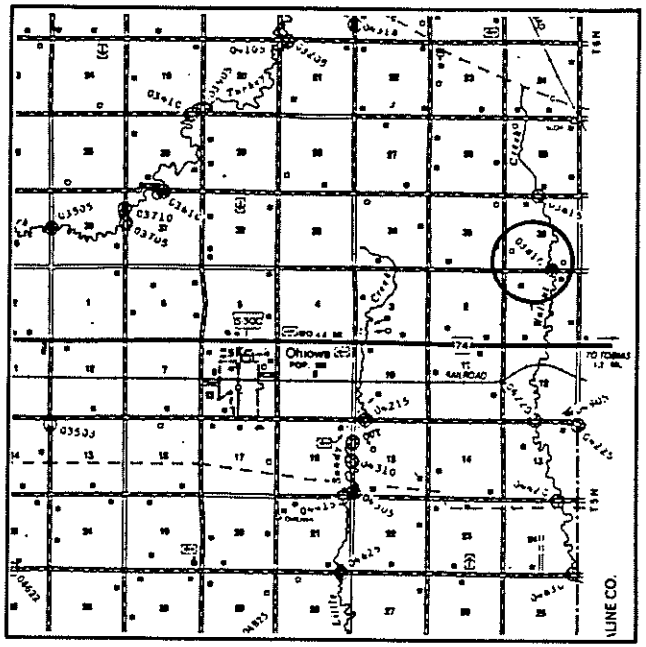
The Langhorst Bridge carries a county road over Walnut Creek on the line between Section 1, T5N, R1W, Franklin Township, and Section 36, T6N, R1W, Glengary Township. The structure is composed of a single-span, 20-foot, filled spandrel concrete arch with flared, sloped wingwalls. A stringcourse runs over the spandrel and to the approximate mid-point of each wing. The stringcourse is surmounted by a concrete parapet with incised rectangular panels. Seams or cracks are visible at the ends of the vault, indicating that the spandrels were poured separately from the arch ring. The Fillmore County Road and Bridge Committee recommended that a bridge be built in this location in April 1919. County Engineer William Biba prepared plans in May 1919, and the bridge was probably constructed shortly thereafter. Unfortunately, county records do not indicate who might have won the contract for the bridge. The Langhorst Bridge is unaltered and has good integrity.

After some initial experimentation with concrete bridge construction in the early 1900s, Fillmore County built concrete arch and slab spans almost exclusively from 1914 through the 1920s. The state engineer appears to have been largely responsible for the county's acceptance of concrete. The state was a major proponent of concrete, believing it to be more durable than steel. Fillmore County relied on state bridge plans until 1918, when it hired William A. Biba as its county engineer. Biba, a graduate of the University of Nebraska, appears to have designed all of the county's bridges until 1931 (using state plans as a model). As one of more than thirty such small-scale concrete structures remaining in the county, the Langhorst Bridge represents this construction trend.

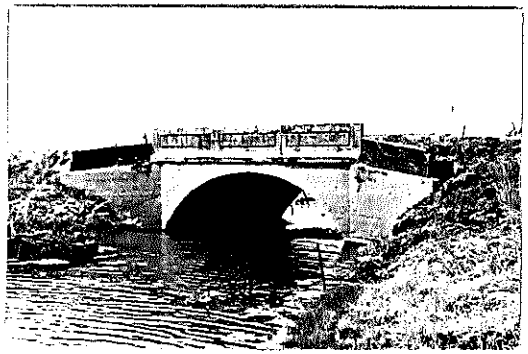
NAME(S) OF STRUCTURE

Langhorst Bridge [Walnut Creek Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003003810; Proceedings of the Fillmore County Commissioners, 1903-1920, located in Fillmore County Courthouse, Geneva, Nebraska, see 22 April 1919, Book 6, p. 336; William A. Biba, "Concrete Arch, 20-Foot. South Side Section 36, Glengary Township. Langhorst Bridge," 9 May 1919, located in Bridge Division, Nebraska Department of Roads; State Board of Irrigation, **Tenth Biennial Report, 1912-1914**, pp. 231-234; Nebraska Department of Public Works, **Monthly Report** (October 1919): 17; field inspection by Jeffrey A. Hess, 20 April 1989.

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DATE

15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Little Sandy Creek Bridge
NDOR: C003004215

FILL25

DATE(S) OF CONSTRUCTION
1925

LOCATION
county road over Little Sandy Creek; S10/15, T5N, R1W
1.7 miles east of Ohiowa; Fillmore County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 15)

CONDITION
fair

OWNER
Fillmore County

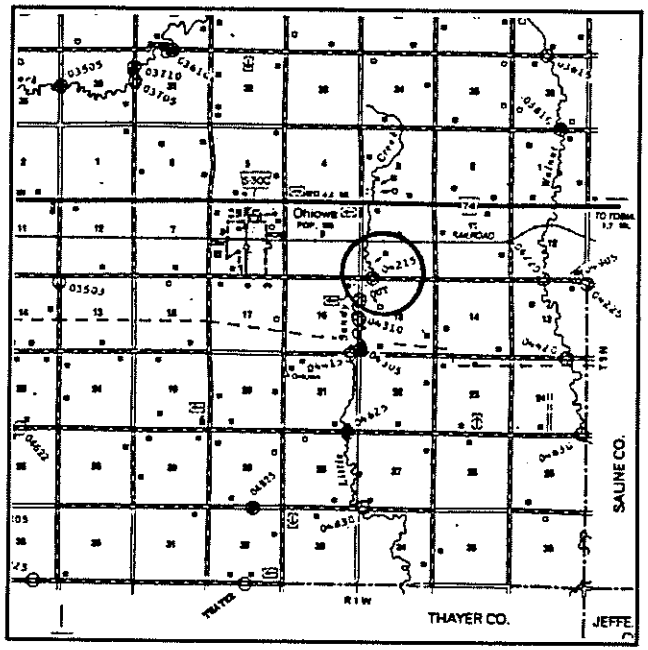
span number:	1	superstructure:	concrete filled spandrel arch
span length:	20.0'	substructure:	concrete abutments with flared, sloped wingwalls
total length:	22.0'	floor/decking:	gravel over earth fill
roadway wdt.:	18.0'	other features:	stringcourse/coping; concrete rails carried by concrete posts detailed with recessed panels

This small-scale bridge carries a county road over Little Sandy Creek between Sections 10 and 15, T5N, R1W, Franklin Township. The structure is composed of a single-span, 20-foot, filled spandrel concrete arch with flared, sloped wingwalls. A stringcourse/coping runs above the spandrels on each elevation. Concrete posts detailed with recessed panels are set on the coping and carry two lines of concrete rails. The posts were originally higher and carried more rails, but the tops have been removed. On the south side, channel-section rails have been welded to exposed rebars in the posts. Due to the alterations, the bridge has poor integrity. Fillmore County Engineer William Biba prepared plans for this bridge in March 1925, and it was probably constructed shortly thereafter. Unfortunately, county records do not provide the name of the builder.

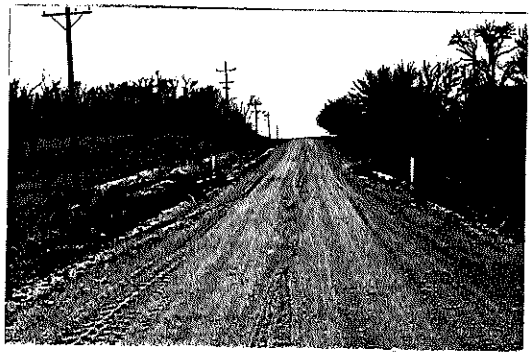
The Little Sandy Creek Bridge is typical of concrete arch construction in Nebraska during the 1910s and 1920s. Due to alterations, however, it is not eligible to the National Register.

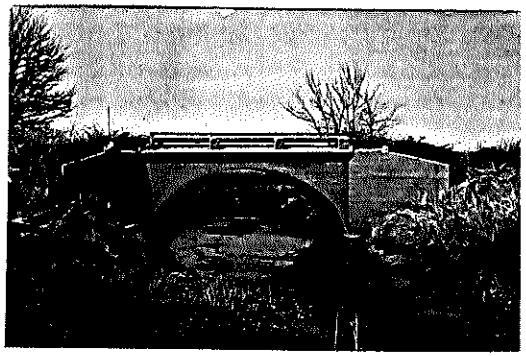
NAME(S) OF STRUCTURE
Little Sandy Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003004215; Proceedings of the Fillmore County Commissioners, 1903-1920, located in Fillmore County Courthouse, Geneva, Nebraska; State Board of Irrigation, **Tenth Biennial Report, 1912-1914**, pp. 231-234; Nebraska Department of Public Works, **Monthly Report** (October 1919): 17; field inspection by Jeffrey A. Hess, 22 April 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Little Sandy Creek Bridge FILL26
NDOR: C003004305

DATE(S) OF CONSTRUCTION
1920

LOCATION
county road over Little Sandy Creek; S15/16, T5N, R1W
0.8 miles south, 1.3 miles east of Ohiowa; Fillmore County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 21)

CONDITION
fair

OWNER
Fillmore County

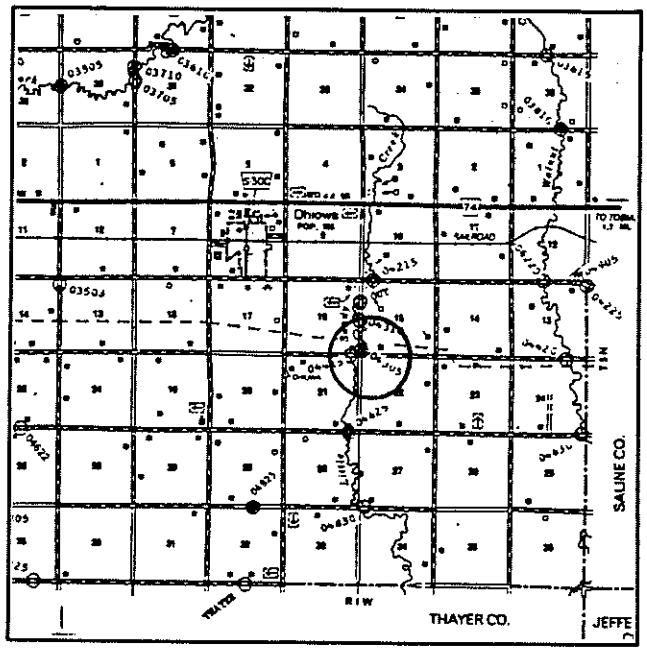
span number:	1	superstructure:	concrete filled spandrel arch
span length:	30.0'	substructure:	concrete abutments with flared, sloped wingwalls
total length:	31.0'	floor/decking:	gravel over earth fill
roadway wdt.:	approx. 20'	other features:	concrete coping over spandrels

This small-scale bridge carries a county road over Little Sandy Creek between Sections 15 and 16, T5N, R1W, Franklin Township. The structure is composed of a single-span, 30-foot, filled spandrel concrete arch with flared, sloped wingwalls. A concrete coping caps the spandrels on each elevation. It was originally surmounted by solid concrete parapets, but these have been removed. Due to the loss of historic fabric, the bridge has poor integrity. The Fillmore County Road and Bridge Committee first recommended building a bridge in this location in April 1919. The bridge was apparently not built until 1920, for the county board did not inspect the structure until October of the next year. At that time, it reported that the bridge had been built by J. W. Kempf, a contractor from Schickley, Nebraska.

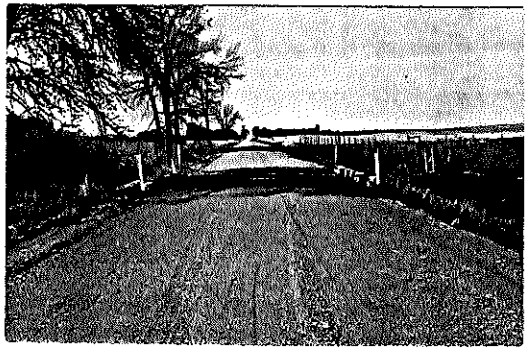
This structure is typical of concrete arch construction in Nebraska during the 1910s and 1920s. Due to alterations, the bridge is not eligible for the National Register.

NAME(S) OF STRUCTURE
Little Sandy Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003004305; Proceedings of the Fillmore County Commissioners, 1903-1920, located in Fillmore County Courthouse, Geneva, Nebraska, see 22 April 1919, Book 6, p. 336; 19 October 1920, Book 6, p. 380; State Board of Irrigation, **Tenth Biennial Report, 1912-1914**, pp. 231-234; Nebraska Department of Public Works, **Monthly Report** (October 1919): 17; field inspection by Jeffrey A. Hess, 21 April 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
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Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Stoy Bridge FILL27
NDOR: C003004318

DATE(S) OF CONSTRUCTION
1916

LOCATION
county road over intermittent stream; S15/16, T6N, R1W
1.7 miles west, 0.8 mile south of Milligan; Fillmore County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 31)

CONDITION
good

OWNER
Fillmore County

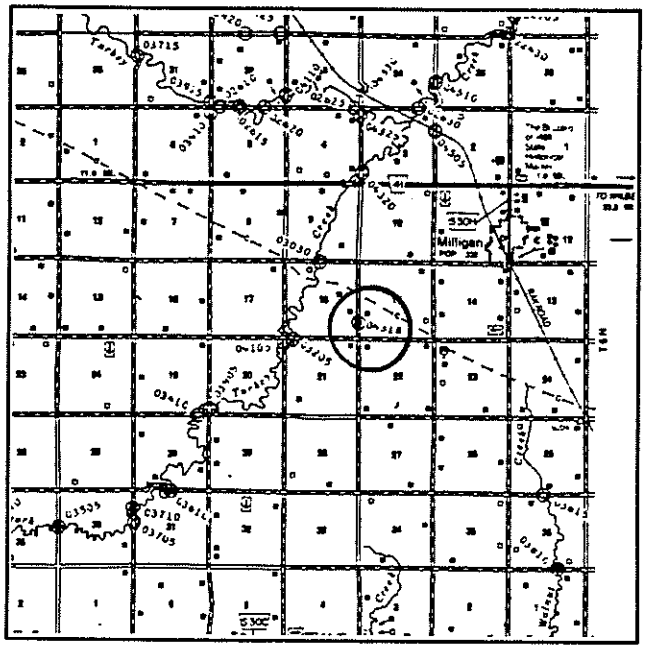
span number:	1	superstructure:	concrete filled spandrel arch
span length:	21.0'	substructure:	concrete abutments with flared, sloped wingwalls
total length:	22.0'	floor/decking:	gravel over earth fill
roadway wdt.:	16.4'	other features:	stringcourse/coping; concrete parapet with recessed rectangular panels

The Stoy Bridge carries a county road over a stream between Sections 15 and 16, T6N, R1W, Glengary Township. The structure is composed of a single-span, 21-foot, filled spandrel concrete arch with flared, sloped wingwalls. A stringcourse/coping runs above the spandrel wall on each elevation. The coping is surmounted by a solid concrete parapet detailed with recessed rectangular panels. The parapets originally enclosed the roadway, but the grade has been raised and is now nearly flush with the tops of the parapets. To retain the extra fill, planks have been added to the tops of the concrete wingwalls. Seams or cracks are visible at each end of the vault. The Fillmore County Road and Bridge Committee first recommended building the Stoy Bridge in June 1916. The county board considered building an I-beam span, but eventually chose concrete. In July 1916, the county awarded Frank N. Craven of Exeter, Nebraska, the contract to build the bridge for $710. The board inspected and accepted the newly completed span in December. The structure is largely unaltered and has retained a high degree of physicalintegrity.

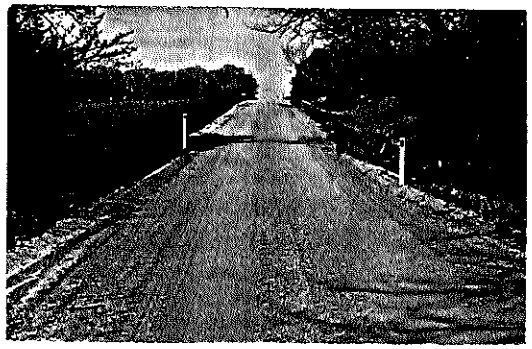
After some initial experimentation with concrete bridge construction in the early 1900s, Fillmore County built concrete arch and slab spans almost exclusively from 1914 through the 1920s. The state engineer appears to have been largely responsible for the county's acceptance of concrete. The state was a major proponent of concrete, believing it to be more durable than steel. Fillmore County relied on state bridge plans until 1918, when it hired William A. Biba as its county engineer. Biba, a graduate of the University of Nebraska, appears to have designed all of the county's bridges until 1931 (using state plans as a model). As one of more than thirty such small-scale concrete structures remaining in the county, the Stoy Bridge represents this construction trend.

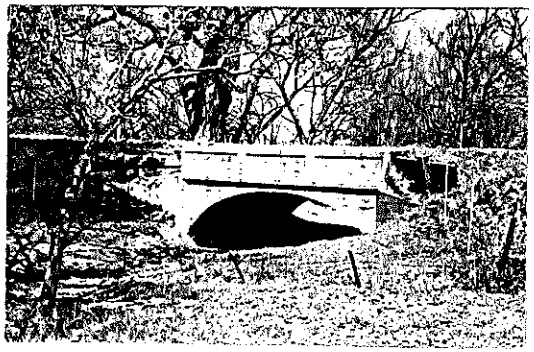
NAME(S) OF STRUCTURE
Stoy Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003004318; Proceedings of the Fillmore County Commissioners, 1903-1920, located in Fillmore County Courthouse, Geneva, Nebraska, refer to the following entries in Book 6: 17 June 1916, p. 250; 18 July 1916, p. 254; 12 December 1916, p. 263; State Board of Irrigation, **Tenth Biennial Report, 1912-1914**, pp. 231-234; Nebraska Department of Public Works, **Monthly Report** (October 1919): 17; field inspection by Jeffrey A. Hess, 20 April 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge FILL28
NDOR: C003004515

DATE(S) OF CONSTRUCTION
1917

LOCATION
county road over intermittent stream; S26/27, T7N, R1W
0.7 miles west, 3 miles north of Milligan; Fillmore County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 31)

CONDITION
good

OWNER
Fillmore County

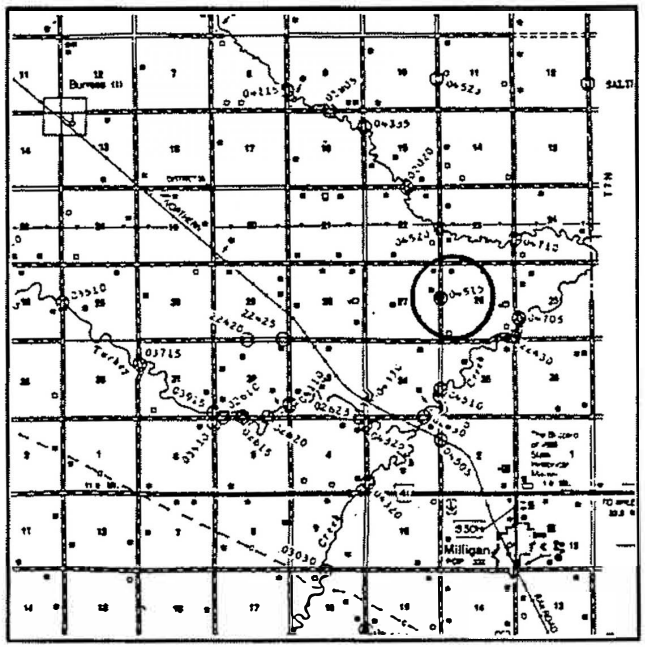
span number:	1	superstructure:	concrete filled spandrel arch
span length:	20.0'	substructure:	concrete abutments with flared, sloped wingwalls
total length:	22.0'	floor/decking:	gravel over earth fill
roadway wdt.:	19.7'	other features:	stringcourse/coping; concrete parapets with incised rectangular panels

This small-scale bridge carries a county road over a stream between Sections 26 and 27, T7N, R1W, Liberty Township. The structure is composed of a single-span, 20-foot, filled spandrel concrete arch with flared, sloped wingwalls. A stringcourse/coping runs above the spandrels. It is surmounted by solid concrete parapets detailed with incised lines in the dado forming rectangular panels. Seams or cracks are visible at the ends of the vault. A disintegrating concrete slab covers the floor under the arch. The Fillmore County Road and Bridge Committee first recommended constructed this bridge in February 1917. In April the county awarded the construction contract to Frank N. Craven of Exeter NE for $675. The county board inspected the newly completed bridge and made final payment in December 1916. The structure appears to be unaltered and has good integrity.

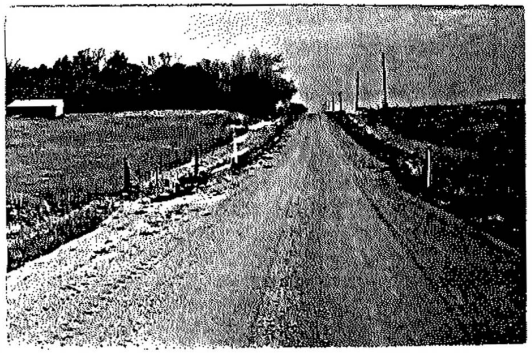
After some initial experimentation with concrete bridge construction in the early 1900s, Fillmore County built concrete arch and slab spans almost exclusively from 1914 through the 1920s. The state engineer appears to have been largely responsible for the county's acceptance of concrete. The state was a major proponent of concrete, believing it to be more durable than steel. Fillmore County relied on state bridge plans until 1918, when it hired William A. Biba as its county engineer. Biba, a graduate of the University of Nebraska, appears to have designed all of the county's bridges until 1931 (using state plans as a model). As one of more than thirty such small-scale concrete structures remaining in the county, this bridge represents this construction trend.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003004515; Proceedings of the Fillmore County Commissioners, 1903-1920, located in Fillmore County Courthouse, Geneva, Nebraska, refer to the following entries in Book 6: February 1917, p. 279; 17 April 1917, p. 280; 11 December 1917, p. 295; State Board of Irrigation, **Tenth Biennial Report, 1912-1914**, pp. 231-234; Nebraska Department of Public Works, **Monthly Report** (October 1919): 17; field inspection by Jeffrey A. Hess, 22 April 1989.

INVENTORIED BY
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Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Beckwar Bridge
NDOR: C003004520

FILL29

DATE(S) OF CONSTRUCTION
1916

LOCATION
county road over intermittent stream; S22/23, T7N, R1W
4.3 miles northwest of Milligan; Fillmore County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 31)

CONDITION
good

OWNER
Fillmore County

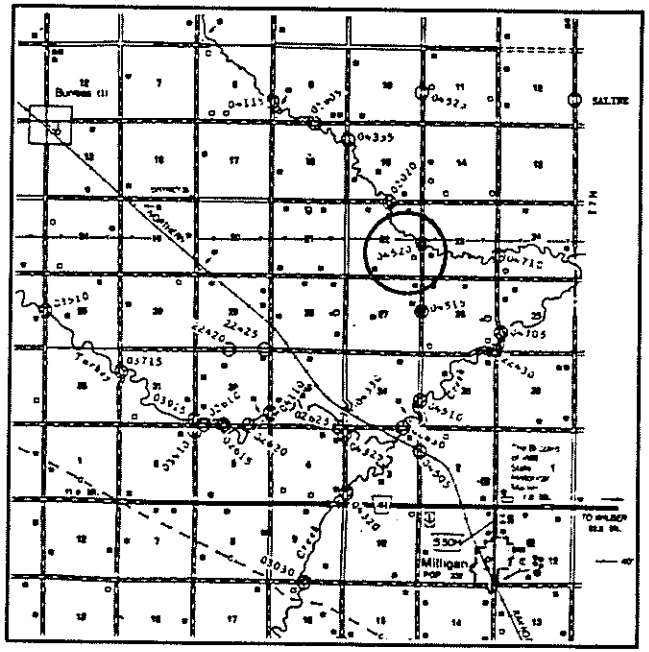
span number:	1	superstructure:	concrete filled spandrel arch
span length:	30.0'	substructure:	concrete abutments with flared, sloped wingwalls
total length:	32.0'	floor/decking:	gravel over earth fill
roadway wdt.:	15.9'	other features:	stringcourse/coping; concrete parapets with recessed panels

The Beckwar Bridge carries a county road over a stream and between Sections 22 and 23, T7N, R1W, Liberty Township. The structure is composed of a single-span, 30-foot, filled spandrel concrete arch with flared, sloped wingwalls. A stringcourse/coping runs over the spandrels on each elevation. It is surmounted by a concrete parapet detailed with recessed rectangular panels in the dado. The northwest and northeast parapet corners are broken. Seams or cracks are visible at the ends of the vault. The Fillmore County Road and Bridge Committee first recommended building the Beckwar Bridge in June 1916, either as a concrete bridge or I-beam span. The county board decided to construct a concrete arch, and awarded the contract to Frank N. Craven of Exeter, Nebraska, for $1495. The newly completed bridge was accepted in December 1916. The structure appears to be unaltered and has retaineda high degree of physical integrity.

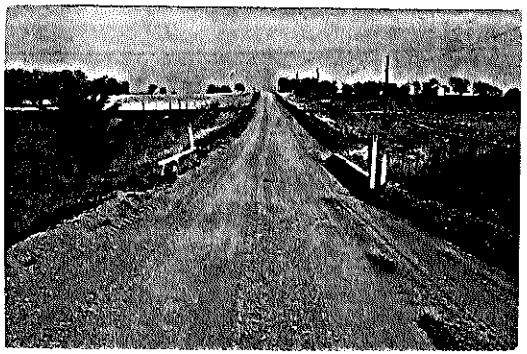
After some initial experimentation with concrete bridge construction in the early 1900s, Fillmore County built concrete arch and slab spans almost exclusively from 1914 through the 1920s. The state engineer appears to have been largely responsible for the county's acceptance of concrete. The state was a major proponent of concrete, believing it to be more durable than steel. Fillmore County relied on state bridge plans until 1918, when it hired William A. Biba as its county engineer. Biba, a graduate of the University of Nebraska, appears to have designed all of the county's bridges until 1931 (using state plans as a model). As one of more than thirty such small-scale concrete structures remaining in the county, the Beckwar Bridge represents this construction trend.

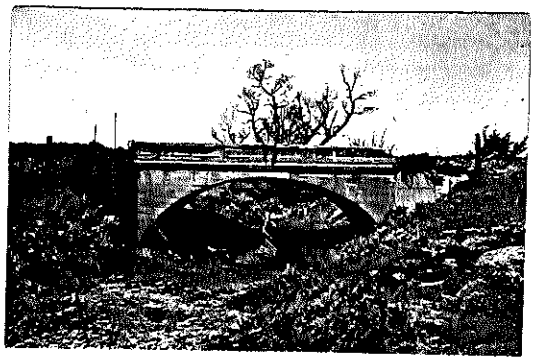
NAME(S) OF STRUCTURE
Beckwar Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003004520; Proceedings of the Fillmore County Commissioners, 1903-1920, located in Fillmore County Courthouse, Geneva, Nebraska, refer to the following entries in Book 6: 17 June 1916, p. 250; 18 July 1916, p. 254; 12 December 1916, p. 263; see the following bridge plans located in Bridge Division, Nebraska Department of Roads: "30-Foot I-Beam Foundation Plan, Section 22 and 23, Liberty Twp.," 8 May 1916, plan number 566; "30-Foot Concrete Arch, Sections 22 and 23, Liberty Township, Beckwar Bridge," 18 May 1916, plan number 601; State Board of Irrigation, Tenth Biennial Report, 1912-1914, pp. 231-234; Nebraska Department of Public Works, Monthly Report (October 1919): 17; field inspection by Jeffrey A. Hess, 22 April 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Johnson Creek Bridge
NDOR: C003004525

FILL30

DATE(S) OF CONSTRUCTION
1923

LOCATION
county road over Johnson Creek; S2/3, T8N, R1W
1.8 miles east, 3 miles north of Exeter; Fillmore County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 13)

CONDITION
fair

OWNER
Fillmore County

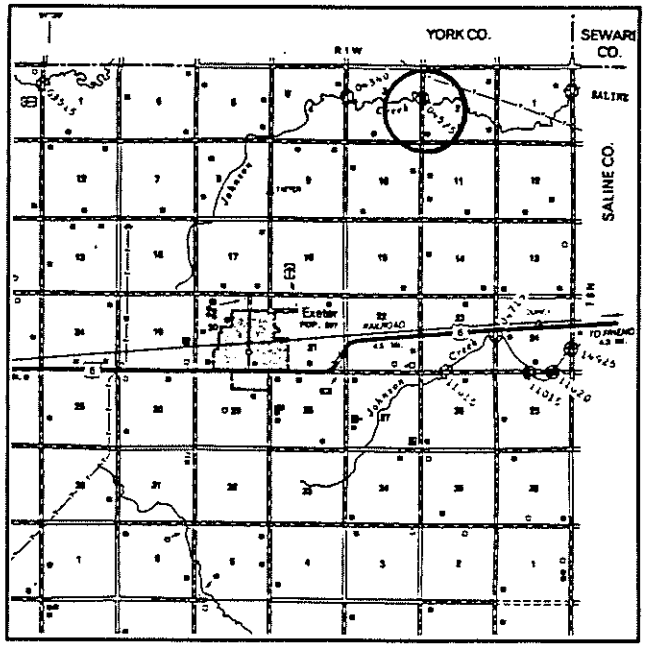
span number:	1	superstructure:	concrete filled spandrel arch
span length:	20.0'	substructure:	concrete abutments with flared, sloped wingwalls
total length:	22.0'	floor/decking:	gravel over earth fill
roadway wdt.:	17.0'	other features:	stringcourse/coping; concrete posts and rails

This small-scale bridge carries a county road over Johnson Creek between Sections 2 and 3, T8N, R1W, Exeter Township. The structure is composed of a single-span, 20-foot, filled spandrel concrete arch with flared, sloped wingwalls. A coping/stringcourse runs over the top of the spandrels and along the wingwalls on both elevations. Concrete posts detailed with recessed panels are set on top of the coping along the wings and over the arch. They carry two rows of concrete rails. The railing along the southeast wingwall is missing. Fillmore County Engineer William Biba prepared plans for this bridge in June 1923. The structure was probably built shortly afterward. Due to the loss of a section of railing, the bridge has only fair integrity.

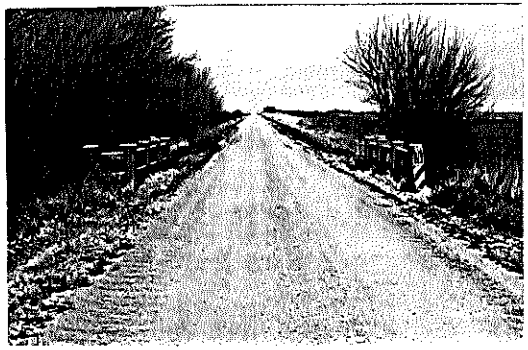
This structure is typical of concrete arch construction in Nebraska during the 1910s and 1920s. Due to the loss of historic fabric, however, the bridge is not eligible to the National Register.

NAME(S) OF STRUCTURE
Johnson Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003004525; Proceedings of the Fillmore County Commissioners, 1903-1920, located in Fillmore County Courthouse, Geneva, Nebraska; William A. Biba, "Plan of 20-Foot Arch . . . , No. D-C61, Between Sections 2 and 3, Exeter Twp.," 6 June 1923, plan number 702, located in Bridge Division, Nebraska Department of Roads; State Board of Irrigation, **Tenth Biennial Report, 1912-1914**, pp. 231-234; Nebraska Department of Public Works, **Monthly Report** (October 1919): 17; field inspection by Jeffrey A. Hess, 22 April 1989.

INVENTORIED BY	**AFFILIATION**	**DATE**
Demian Hess	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Little Sandy Creek Bridge FILL31
NDOR: C003004625

DATE(S) OF CONSTRUCTION
1917

LOCATION
county road over Little Sandy Creek; S21/28, T5N, R1W
2 miles south, 1 mile east of Ohiowa; Fillmore County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 28)

CONDITION
fair

OWNER
Fillmore County

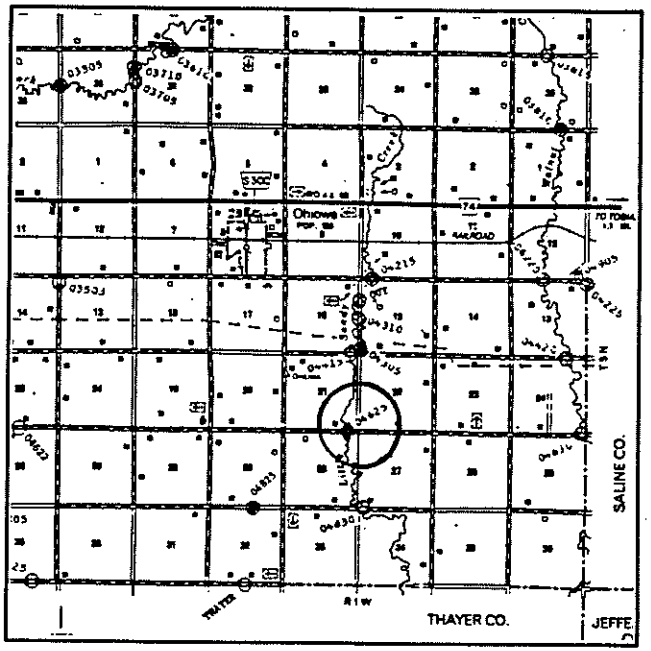
span number:	1	superstructure:	concrete filled spandrel arch
span length:	40.0'	substructure:	concrete abutments with flared, sloped wingwalls
total length:	40.0'	floor/decking:	gravel over earth fill
roadway wdt.:	approx. 20'	other features:	coping over spandrels

This small-scale bridge carries a county road over Little Sandy Creek between Sections 21 and 28, T5N, R1W, Franklin Township. The structure is composed of a single-span, 40-foot, filled spandrel concrete arch with flared, sloped wingwalls. A concrete coping runs above the spandrels and along the wingwalls. A concrete parapet originally stood on top of the coping, but it has been removed. The Fillmore County Road and Bridge Committee first recommended that this bridge be constructed in February 1917. In April 1917 the county board awarded Frank N. Craven of Exeter, Nebraska the construction contract for $1,900. Craven completed the bridge by December of that year. Due to the removal of its parapet, the bridge has poor integrity.

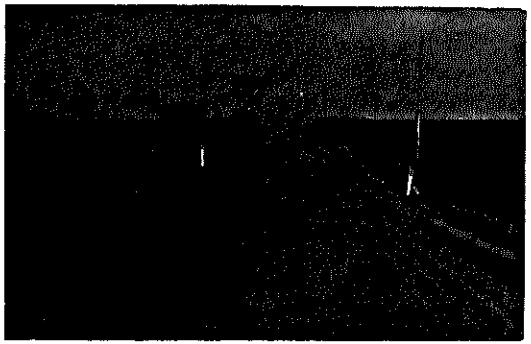
This structure is typical of concrete arch construction in Nebraska during the 1910s and 1920s. Due to alterations, however, the bridge is not eligible to the National Register.

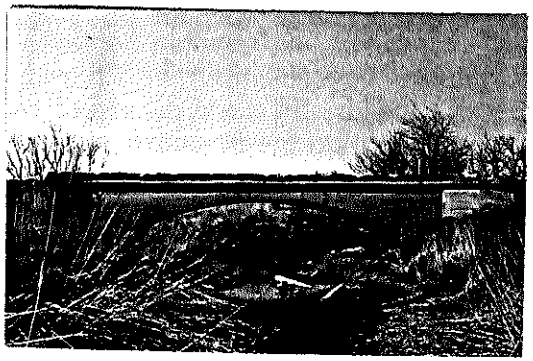
NAME(S) OF STRUCTURE
Little Sandy Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003004625; Proceedings of the Fillmore County Commissioners, 1903-1920, located in Fillmore County Courthouse, Geneva, Nebraska, see the following entries in Book 6: February 1917, p. 279; 18 April 1917, p. 280; 11 December 1917, p. 295; State Board of Irrigation, **Tenth Biennial Report, 1912-1914**, pp. 231-234; Nebraska Department of Public Works, **Monthly Report** (October 1919): 17; field inspection by Jeffrey A. Hess, 21 April 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C003004825

FILL32

DATE(S) OF CONSTRUCTION
ca.1925

LOCATION
county road over intermittent stream; S29/32, T5N, R1W
3 miles south of Ohiowa; Fillmore County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 17)

CONDITION
good

OWNER
Fillmore County

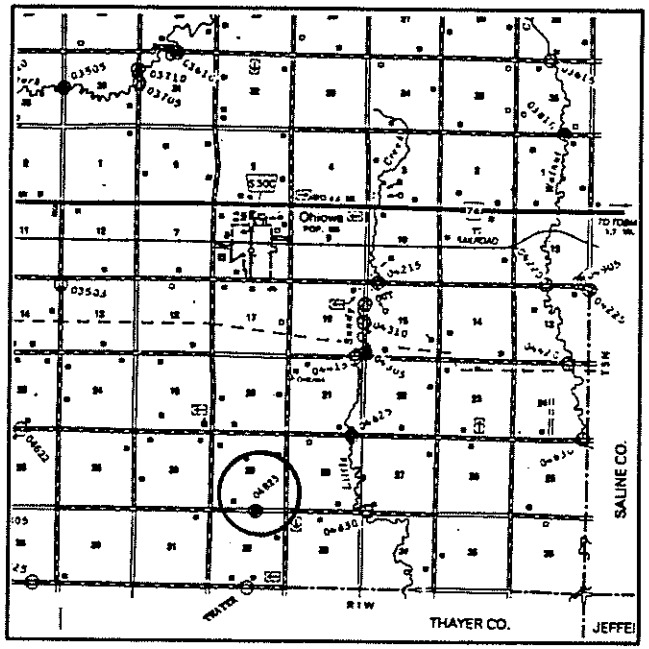
span number:	1	superstructure:	steel stringer
span length:	28.0'	substructure:	steel pile bent abutments with timber back and wingwalls
total length:	30.0'	floor/decking:	corrugated steel deck over steel stringers
roadway wdt.:	19.9'	other features:	steelmakers' marks: Colorado

This small-scale bridge carries a county road over a stream on the line between Sections 29 and 32, T5N, R1W, Franklin Township. The structure is a 30-foot steel stringer on steel pile bent abutments. County records do not provide any information on the bridge, but its design is entirely typical of steel stringers found throughout the State of Nebraska. The bridge was probably built ca.1925, as it would probably have a narrower roadway if built at an earlier date, and would probably have a concrete deck and wider roadway if built at a later time.

This structure is typical of the thousands of small-scale steel stringer spans built in Nebraska in the 1910s and 1920s.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003004825; Proceedings of the Fillmore County Commissioners, 1903-1920, located in Fillmore County Courthouse, Geneva, Nebraska; State Board of Irrigation, **Tenth Biennial Report**, 1912-1914, pp. 231-234; Nebraska Department of Public Works, **Monthly Report** (October 1919): 17; field inspection by Jeffrey A. Hess, 21 April 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge FILL33
NDOR: C003010920

DATE(S) OF CONSTRUCTION
1917

LOCATION
county road over intermittent stream; S2/3, T8N, R4W
1.5 miles west, 4.1 miles north of Grafton; Fillmore County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 31)

CONDITION
fair

OWNER
Fillmore County

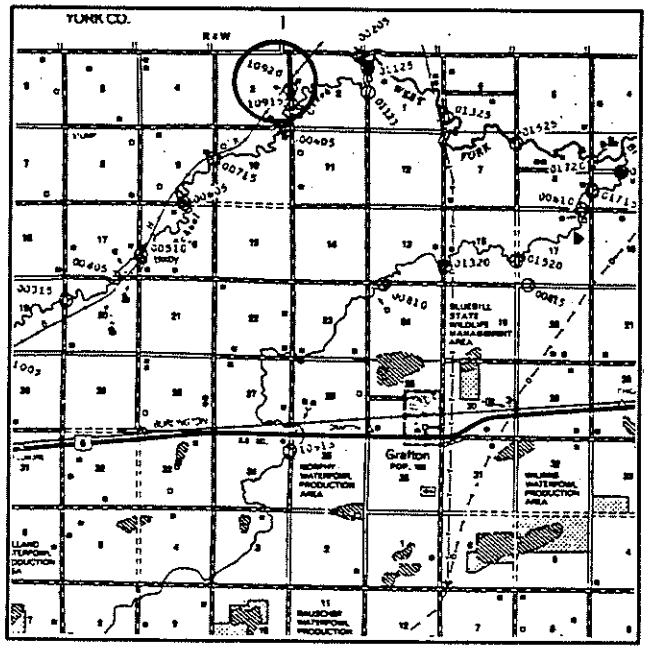
span number:	1	superstructure:	concrete filled spandrel arch
span length:	30.0'	substructure:	concrete abutments with flared, sloped wingwalls
total length:	32.0'	floor/decking:	gravel over earth fill
roadway wdt.:	20.0'	other features:	stringcourse/coping; concrete parapet with incised rectangular panels; flex metal guard rails bolted to channel posts

This small-scale bridge carries a county road over a stream between Sections 2 and 3, T8N, R4W, Grafton Township. The structure is composed of a single-span, 30-foot, filled spandrel concrete arch with flared, sloped wingwalls. A stringcourse/coping runs along the spandrel walls on each elevation. It is surmounted by concrete parapets detailed with incised rectangular panels. Flex metal barricades on angle section posts have been bolted to the outside of the parapets. Seams or cracks are also visible at either end of the vault. The Fillmore County Road and Bridge Committee first recommended construction of this bridge in February 1917. On April 18, 1917, the county board awarded the construction contract to J.W. Kempf of Schickley, Nebraska for $1600. Schickley completed the bridge by December of that year. The only alteration appears to be the addition of flex metal railings, and the bridge has fair integrity.

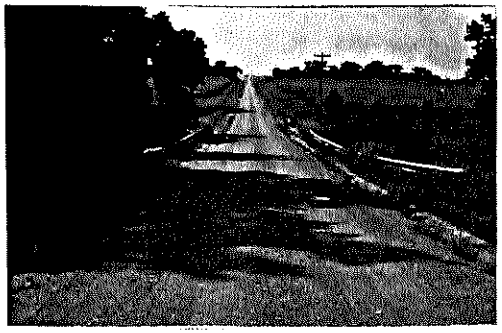
After some initial experimentation with concrete bridge construction in the early 1900s, Fillmore County built concrete arch and slab spans almost exclusively from 1914 through the 1920s. The state engineer appears to have been largely responsible for the county's acceptance of concrete. The state was a major proponent of concrete, believing it to be more durable than steel. Fillmore County relied on state bridge plans until 1918, when it hired William A. Biba as its county engineer. Biba, a graduate of the University of Nebraska, appears to have designed all of the county's bridges until 1931 (using state plans as a model). As one of more than thirty such small-scale concrete structures remaining in the county, this bridge represents this construction trend.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003010920; Proceedings of the Fillmore County Commissioners, 1903-1920, located in Fillmore County Courthouse, Geneva, Nebraska, refer to the following entries in Book 6: February 1917, p. 279; 18 April 1917, p. 280; 11 December 1917, p. 295; State Board of Irrigation, **Tenth Biennial Report, 1912-1914**, pp. 231-234; Nebraska Department of Public Works, **Monthly Report** (October 1919): 17; field inspection by Jeffrey A. Hess, April 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Johnson Creek Bridge
NDOR: C003011015

FILL34

DATE(S) OF CONSTRUCTION
1919

LOCATION
county road over Johnson Creek; S24/25, T8N, R1W
3.2 miles east of Exeter; Fillmore County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 19)

CONDITION
poor

OWNER
Fillmore County

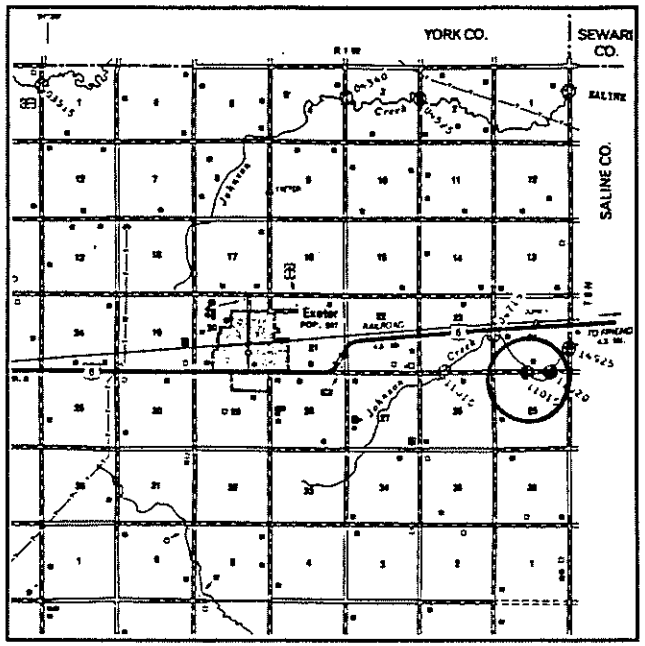
span number:	1	superstructure:	concrete filled spandrel arch
span length:	25.0'	substructure:	concrete abutments with flared, sloped wingwalls
total length:	27.0'	floor/decking:	gravel over earth fill
roadway wdt.:	20.2'	other features:	stringcourse/coping over spandrels; concrete parapet with recessed rectangular panels

This small-scale bridge carries a county road over Johnson Creek between Sections 24 and 25, T8N, R1W, Exeter Township. The structure is a single-span, 25-foot, filled spandrel concrete arch with flared, sloped wingwalls. A concrete coping or stringcourse runs over the spandrels on each elevation. The coping is topped by a concrete parapet detailed with recessed rectangular panels. The southern parapet is broken, and concrete pipe culverts have been run through both abutments. Due to these alterations, the bridge has very poor integrity. The Fillmore County Road and Bridge Committee first recommended building this bridge in April 1919, and plans, probably by county engineer William Biba, were prepared in May of that year. The bridge was probably constructed shortly thereafter.

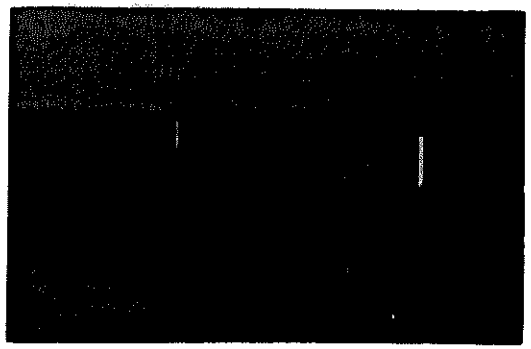
Due to alterations, this bridge has poor integrity and is not eligible for the National Register.

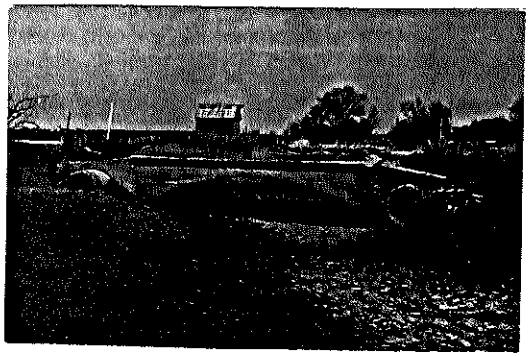
NAME(S) OF STRUCTURE
Johnson Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003011015; Proceedings of the Fillmore County Commissioners, 1903-1920, located in Fillmore County Courthouse, Geneva, Nebraska, refer to 22 April 1919, Book 6, p. 336; "25-Foot Concrete Arch, Sections 24 and 25, Exeter," 10 May 1919, plan number 626, located in Bridge Division, Nebraska Department of Roads; State Board of Irrigation, **Tenth Biennial Report, 1912-1914**, pp. 231-234; Nebraska Department of Public Works, **Monthly Report** (October 1919): 17; field inspection by Jeffrey A. Hess, 22 April 1989.

INVENTORIED BY	AFFILIATION	DATE
Demian Hess	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Johnson Creek Bridge
NDOR: C003011020

FILL35

DATE(S) OF CONSTRUCTION
1918

LOCATION
county road over Johnson Creek; S24/25, T8N, R1W
3.6 miles east of Exeter; Fillmore County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 26)

CONDITION
fair

OWNER
Fillmore County

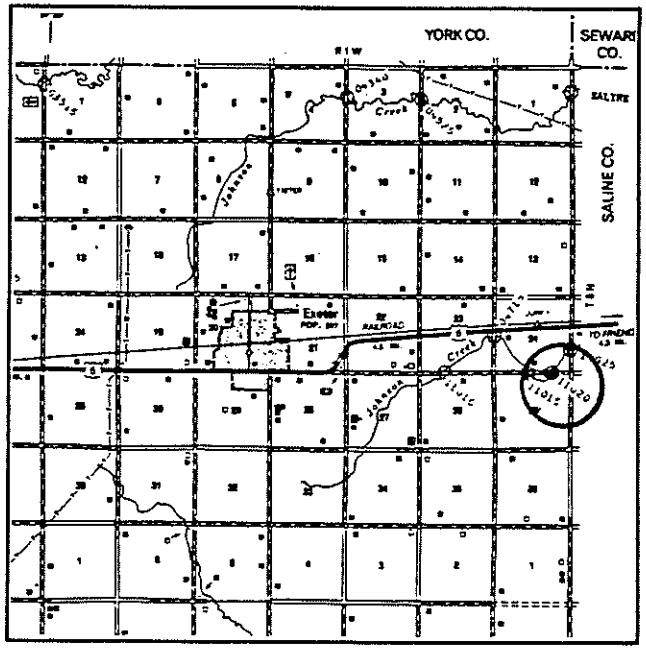
span number:	1	superstructure:	concrete filled spandrel arch
span length:	25.0'	substructure:	concrete abutments with flared, sloped wingwalls
total length:	27.0'	floor/decking:	gravel over earth fill
roadway wdt.:	20.2'	other features:	stringcourse/coping over spandrels; concrete parapet with incised rectangular panels

This small-scale bridge carries a county road over Johnson Creek between Sections 24 and 25, T8N, R1W, Exeter Township. The bridge is a single-span, 25-foot, filled spandrel concrete arch with flared, sloped wingwalls. A concrete stringcourse or coping runs over the spandrels on both elevations. It is surmounted by concrete parapets detailed with incised rectangular panels. The south end of the east parapet has broken off. Seams or cracks are visible at each end of the vault, and cracks have developed in the arch on the east side. Due to these problems, the bridge has only fair integrity. The Fillmore County Road and Bridge Committee first recommended constructing this bridge in April 1918. On 21 May 1918, the county board awarded Frank N. Craven of Exeter NE the construction contract for $1240, and he completed the structure later that year.

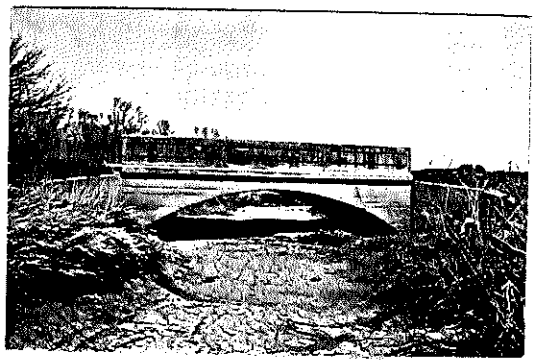
This structure is typical of concrete arch construction in Nebraska during the 1910s and 1920s. Due to deterioration, however, the bridge is not eligible to the National Register.

NAME(S) OF STRUCTURE
Johnson Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003011020; Proceedings of the Fillmore County Commissioners, 1903-1920, located in Fillmore County Courthouse, Geneva, Nebraska, see 21 May 1918, Book 6, p. 309; "25 Foot Concrete Arch . . . , Sections 24 and 25, Exeter Twp.," 1 May 1918, plan number 602, located in Bridge Division, Nebraska Department of Roads; State Board of Irrigation, **Tenth Biennial Report, 1912-1914**, pp. 231-234; Nebraska Department of Public Works, **Monthly** Report (October 1919): 17; field inspection by Jeffrey A. Hess, 22 April 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Turkey Creek Bridge
NDOR: C003012410

FILL36

DATE(S) OF CONSTRUCTION
1919

LOCATION
county road over Turkey Creek; S28/33, T7N, R3W
0.1 miles north, 2.4 miles west of Geneva; Fillmore County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 25)

CONDITION
good

OWNER
Fillmore County

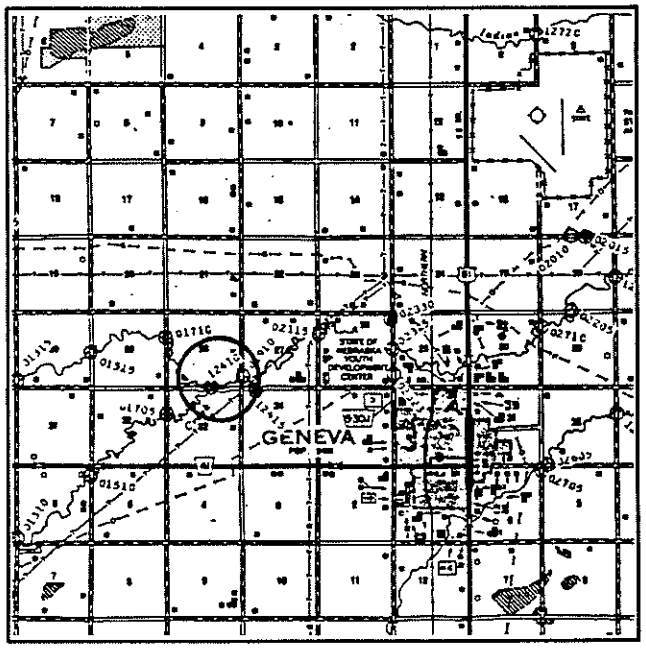
span number:	1	superstructure:	concrete filled spandrel arch
span length:	25.0'	substructure:	concrete abutments with flared, sloped wingwalls
total length:	28.0'	floor/decking:	gravel over earth fill
roadway wdt.:	20.2'	other features:	stringcourse/coping over spandrels and wingwalls; concrete parapet with recessed panels

This small-scale bridge carries a county road over Turkey Creek between Sections 28 and 33, T7N, R3W, Geneva Township. The bridge is a single-span, 25-foot, filled spandrel concrete arch with flared, sloped wingwalls. A concrete coping or stringcourse runs over the arch and wings. It is surmounted by a concrete parapet detailed with recessed panels. Seams or cracks are visible at each end of the vault. The Fillmore County Road and Bridge Committee first recommended building this bridge in April 1919. Plans for the bridge dated 15 May 1919, probably prepared by county engineer William Biba, are on file at the Nebraska Department of Roads. The bridge is unaltered and has high integrity.

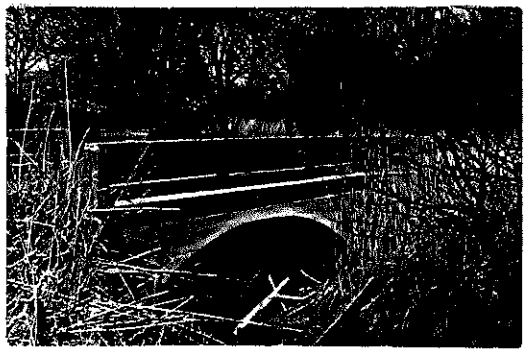
After some initial experimentation with concrete bridge construction in the early 1900s, Fillmore County built concrete arch and slab spans almost exclusively from 1914 through the 1920s. The state engineer appears to have been largely responsible for the county's acceptance of concrete. The state was a major proponent of concrete, believing it to be more durable than steel. Fillmore County relied on state bridge plans until 1918, when it hired William A. Biba as its county engineer. Biba, a graduate of the University of Nebraska, appears to have designed all of the county's bridges until 1931 (using state plans as a model). As one of more than thirty such small-scale concrete structures remaining in the county, this bridge represents this construction trend.

NAME(S) OF STRUCTURE
Turkey Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003012410; Proceedings of the Fillmore County Commissioners, 1903-1920, located in Fillmore County Courthouse, Geneva, Nebraska, see 22 April 1919, Book 6, p. 336; State Board of Irrigation, **Tenth Biennial Report, 1912-1914**, pp. 231-234; Nebraska Department of Public Works, **Monthly Report** (October 1919): 17; field inspection by Jeffrey A. Hess, 22 April 1989.

INVENTORIED BY	**AFFILIATION**	**DATE**
Demian Hess	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C003012415

FILL37

DATE(S) OF CONSTRUCTION
1919

LOCATION
county road over intermittent stream; S27/34, T7N, R3W
0.1 miles north, 1.8 miles west of Geneva; Fillmore County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 25)

CONDITION
good

OWNER
Fillmore County

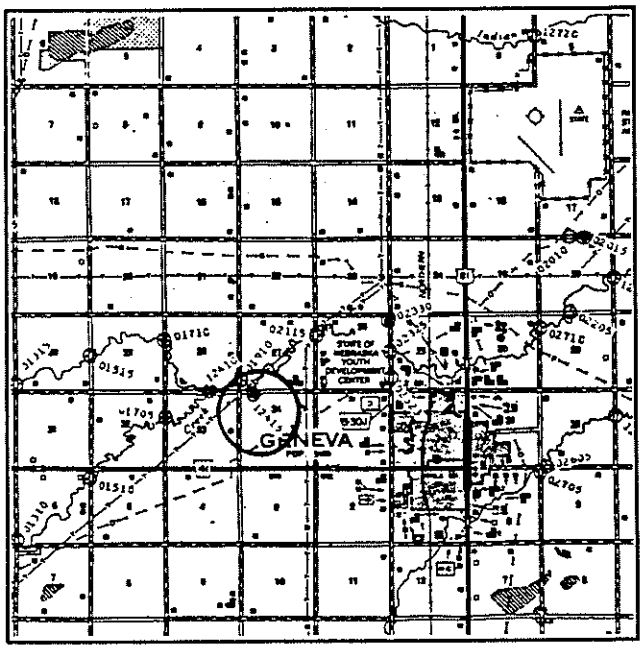
span number:	1	superstructure:	concrete filled spandrel arch
span length:	20.0'	substructure:	concrete abutments with flared, sloped wingwalls
total length:	22.0'	floor/decking:	gravel over earth fill
roadway wdt.:	19.2'	other features:	concrete stringcourse/coping over spandrels; concrete parapet with recessed rectangular panels

This small-scale bridge carries a county road over a stream on the line between Sections 27 and 34, T7N, R3W, Geneva Township. The structure is a single-span, 20-foot, filled spandrel concrete arch with flared, sloped wingwalls. A concrete coping or stringcourse runs on top of the spandrel walls. It is surmounted by concrete parapets detailed with recessed rectangular panels. Seams or cracks are visible at either end of the vault. The Fillmore County Road and Bridge Committee first recommended building this bridge in April 1919. The span was probably erected shortly afterward, although the county records do not provide any further information. The bridge is unaltered and has good integrity.

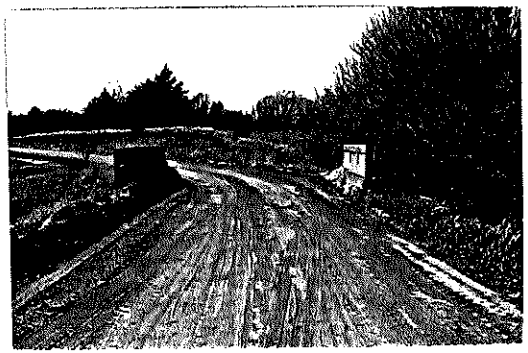
This structure is typical of concrete construction in Nebraska during the 1910s and 1920s.

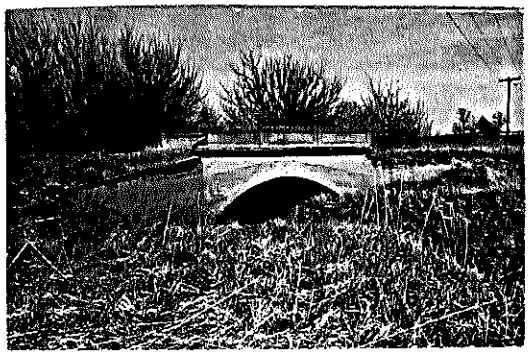
NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003012415; Proceedings of the Fillmore County Commissioners, 1903-1920, located in Fillmore County Courthouse, Geneva, Nebraska, see 22 April 1919, Book 6, p. 336; State Board of Irrigation, **Tenth Biennial Report, 1912-1914**, pp. 231-234; Nebraska Department of Public Works, **Monthly Report** (October 1919): 17; field inspection by Jeffrey A. Hess, April 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Weber Bridge [Johnson Creek Bridge]
NDOR: C003014925

FILL38

DATE(S) OF CONSTRUCTION
1920

LOCATION
county road over Johnson Creek; S24, T8N, R1W
4 miles east of Exeter; Fillmore County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 21)

CONDITION
good

OWNER
Fillmore County

span number:	1	superstructure:	concrete filled spandrel arch
span length:	30.0'	substructure:	concrete abutments with flared, sloped wingwalls
total length:	32.0'	floor/decking:	gravel over earth fill
roadway wdt.:	16.5'	other features:	concrete stringcourse/coping over spandrels; concrete parapet with incised rectangular panels

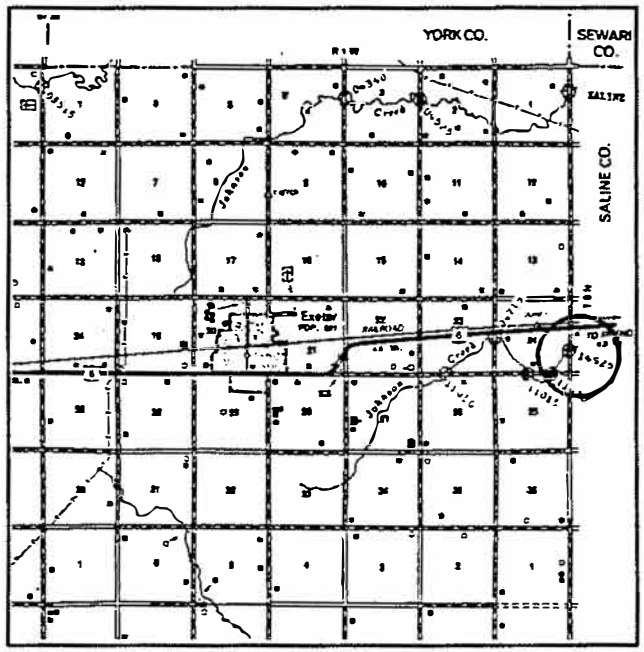
The Weber Bridge carries a county road over Johnson Creek on the Fillmore/Saline County line. The structure is a single-span, 30-foot, filled spandrel concrete arch with flared, sloped wingwalls. A concrete slab covers the floor beneath the arch. A concrete stringcourse or coping runs on top of the spandrel walls. The coping is surmounted by a concrete parapet detailed with incised rectangular panels. Seams or cracks are visible at either end of the vault. The Fillmore County Road and Bridge Committee first recommended building the Weber Bridge in June 1920. County engineer William Biba prepared plans the next month, and the bridge was probably built shortly afterward. The structure is unaltered and had good integrity.

This structure is typical of concrete arch construction in Nebraska during the 1910s and 1920s.

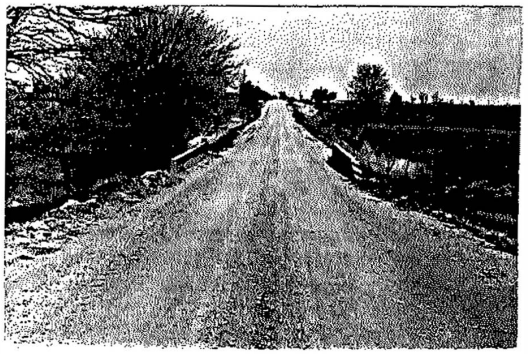
NAME(S) OF STRUCTURE

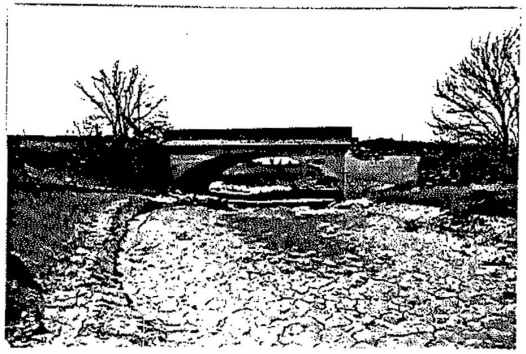
Weber Bridge [Johnson Creek Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003014925; Proceedings of the Fillmore County Commissioners, 1903-1920, located in Fillmore County Courthouse, Geneva, Nebraska, 15 June 1920, Book 6, p. 369; William A. Biba, "30-Foot Concrete Arch, Weber Bridge," 6 July 1920, plan number 641, located in Bridge Division, Nebraska Department of Roads; State Board of Irrigation, **Tenth Biennial Report, 1912-1914**, pp. 231-234; Nebraska Department of Public Works, **Monthly Report** (October 1919): 17; field inspection by Jeffrey A. Hess, 22 April 1989.

INVENTORIED BY	**AFFILIATION**	**DATE**
Demian Hess	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C003022725

FILL39

DATE(S) OF CONSTRUCTION
1917

LOCATION
county road over intermittent stream; S19/20, T8N, R2W
0.9 miles north of Fairmont; Fillmore County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 31)

CONDITION
good

OWNER
Fillmore County

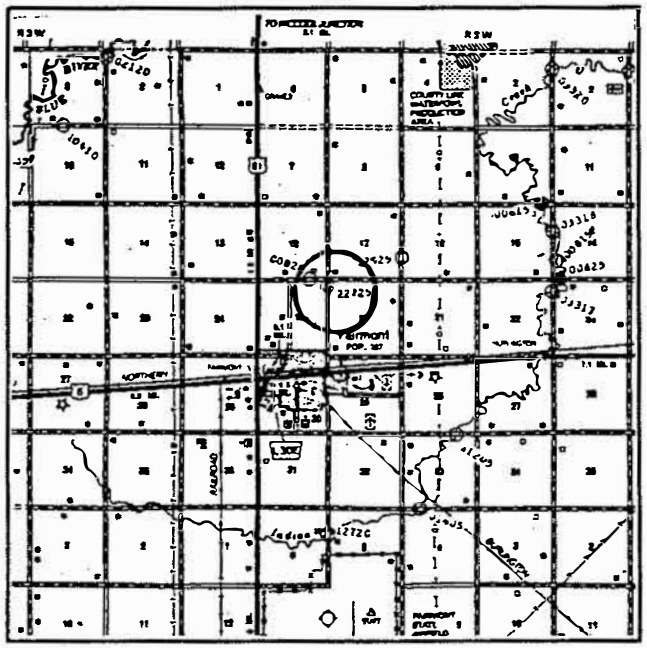
span number:	1	superstructure:	concrete filled spandrel arch
span length:	25.0'	substructure:	concrete abutments with flared, sloped wingwalls
total length:	27.0'	floor/decking:	gravel over earth fill
roadway wdt.:	approx. 20'	other features:	concrete coping or stringcourse over spandrels and wings; concrete parapet with recessed rectangular panels

This small-scale bridge carries a county road over a stream between Sections 19 and 20, T8N, R2W, Fairmont Township. The structure is a single-span, 25-foot, filled spandrel concrete arch with flared, sloped wingwalls. A concrete coping or stringcourse runs along the top of the spandrels and out along the wingwalls. A concrete parapet is set on top of the coping and to the ends of the wings. The parapet is detailed with recessed rectangular panels. The parapet over the northeast wingwall has broken away. Seams are also visible at each end of the vault. The Fillmore County Road and Bridge Committee first recommended constructing this bridge in February 1917. On April 18, 1917, the county board awarded the construction contract to the Elkhorn Bridge Company of Fremont NE, low bidder at $820. The contractor completed the bridge by December 1917. The span appears to be unaltered and has fair integrity.

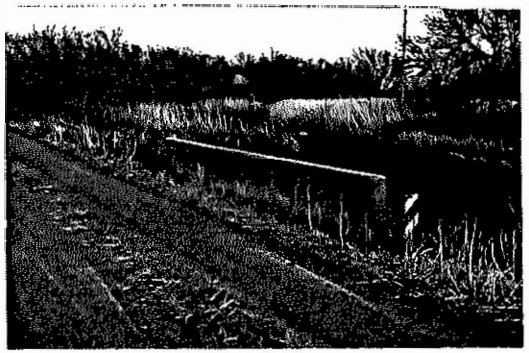
After some initial experimentation with concrete bridge construction in the early 1900s, Fillmore County built concrete arch and slab spans almost exclusively from 1914 through the 1920s. The state engineer appears to have been largely responsible for the county's acceptance of concrete. The state was a major proponent of concrete, believing it to be more durable than steel. Fillmore County relied on state bridge plans until 1918, when it hired William A. Biba as its county engineer. Biba, a graduate of the University of Nebraska, appears to have designed all of the county's bridges until 1931 (using state plans as a model). As one of more than thirty such small-scale concrete structures remaining in the county, this bridge represents this construction trend.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003022725; Proceedings of the Fillmore County Commissioners, 1903-1920, located in Fillmore County Courthouse, Geneva, Nebraska, refer to the following entries in Book 6: 20 February 1917, p. 279; 18 April 1917, p. 280; 11 December 1917, p. 295; State Board of Irrigation, **Tenth Biennial Report, 1912-1914**, pp. 231-234; Nebraska Department of Public Works, **Monthly Report** (October 1919): 17; field inspection by ~~Jeffrey~~ A. Hess, April 1989.

INVENTORIED BY	**AFFILIATION**	**DATE**
Demian Hess	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Turkey Creek Bridge
NDOR: C003103205

FRAN01

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over Turkey Creek; S18/19, T2N, R16W
3.7 miles north and 1.7 miles west of Naponee; Franklin County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 22)

CONDITION
good

OWNER
Franklin County

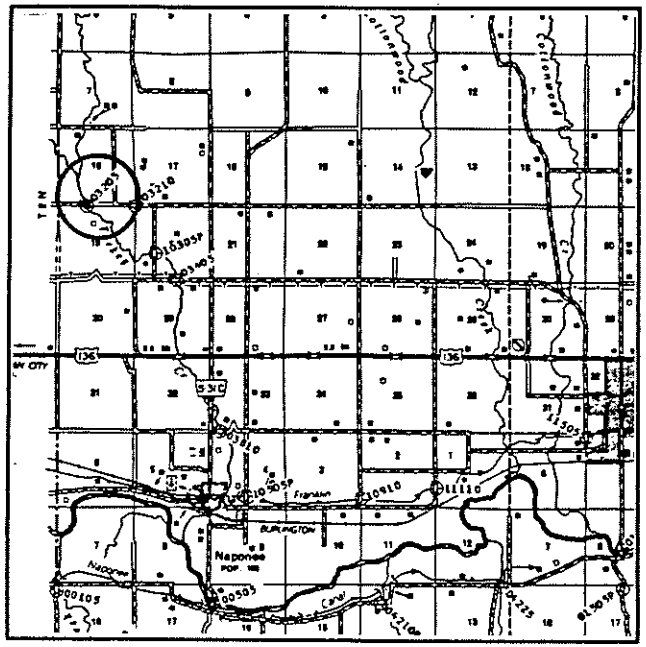
span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt half-hip pony truss
span length:	60.0'	substructure:	steel pile bent abutments with timber back and flared wing walls
total length:	62.0'	floor/decking:	steel plate over I-beam stringers
roadway wdt.:	15.7'	other features:	upper chord: back-to-back channels with cover plate and battens; lower chord: 2 eyebars; vertical: 4 angles with lacing; diagonal: 2 eyebars; counter: 1 eyerod with turnbuckle; floor beam: I-beam, bolted to angle which is riveted to hanger plate - hanger plate is riveted to bottom of vertical; bottom lateral: cross-braced circular-section eyerod with transverse plate welded beneath; railing: lattice

This bridge is a single-span, pin-connected Pratt half-hip pony truss. It carries a gravel-surfaced county over Turkey Creek on the line between Sections 18 and 19, T2N, R16W, Farmers Township. The bridge has good physical integrity, being in good condition with only minor welding to reinforce the bottom lateral and abutments. According to Franklin County Commissioners' records, the first bridge at this site was built by the Canton Bridge Company in 1898-99. Judging from the bridge's narrow roadway width, half-hip design, and pinned construction, it was probably built sometime around 1910.

Many Nebraska bridge erectors marketed the Pratt half-hip pony truss extensively in the early 1900s. Lacking a vertical at the hip connection, it was slightly lighter - and thus cheaper to fabricate - than the standard Pratt truss. The state engineer's office did not adopt the half-hip design as a state standard however, and as the counties began using the state standards increasingly in the mid-1910s, erection of half-hip ponies decreased quickly. Nevertheless, numerous half-hip trusses remain in use on Nebraska's secondary roads today. With its construction history largely undocumented, the Turkey Creek Bridge is not one of the more noteworthy examples.

NAME(S) OF STRUCTURE
Turkey Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003103205; Proceedings of the Franklin County Commissioners, located in Franklin County Courthouse, Franklin, Nebraska, see following entries in Book 4: 13 July 1898 (page 226), 16 December 1898 (page 245), 11 January 1899 (page 248); field inspection by Demian Hess, 22 January 1990.

INVENTORIED BY	AFFILIATION	DATE
Demian Hess	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Republican River Bridge FRAN02
NDOR: C003104705

DATE(S) OF CONSTRUCTION
1911

LOCATION
county road over the Republican River; S11/12, T1N, R13W
1 mile east and 1.5 miles south of Riverton; Franklin County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 59)

CONDITION
good

OWNER
Franklin County

span number:	3	superstructure:	steel, 6- / 7-panel, pin-connected, Pratt through truss
span length:	120.0'; 100.0'	substructure:	steel pile bent abutments with timber wingwalls; steel pile bent and cylinder piers
total length:	322.0'	floor/decking:	steel plate over I-beam stringers
roadway wdt.:	15.8'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: 2 eyebars; vertical: back-to-back channels with lacing; diagonal: 2 eyebars; counter: eyerods with turnbuckles; portal: top and bottom struts and intermediate bracing all back-to-back angles; overhead: back-to-back angles with continuous plate; sway bracing: face-to-face angles between overhead bracing and verticals; top lateral and bottom lateral: cross-braced circular-section eyerods; floor beam: I-beam riveted to angle which is bolted to hanger plate - hanger plate is riveted to bottom of vertical; railing: lattice

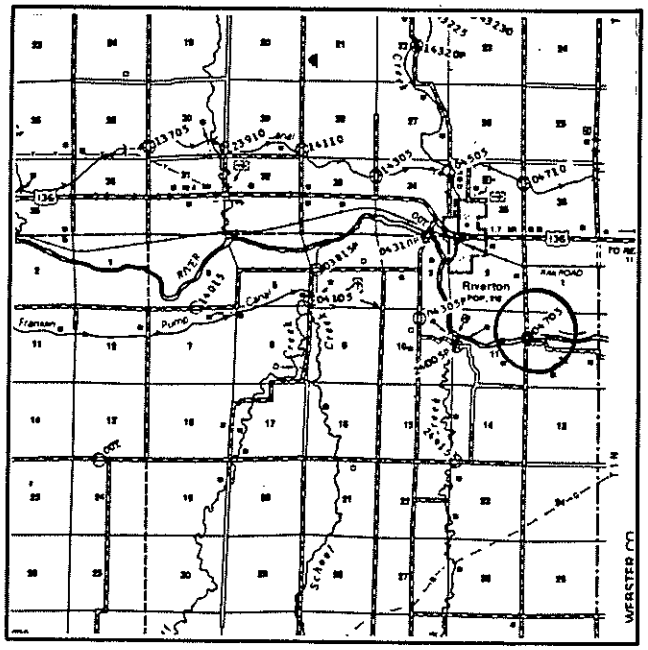
A 3-span, pin-connected Pratt through truss, this bridge carries a gravel-surfaced county road over the Republican River on the north-south line between Sections 11 and 12, T1N, R13W, Washington Township. The structure has good historical integrity, being in good physical condition and largely unaltered. Minor changes include construction of a new deck in 1976, and also construction of a new north pier at an undetermined time. The pier, as well as the abutments, are bolted steel pile bents, and probably date to sometime before the 1940s. Builder's plates over each portal identify the construction date as 1911 and the builder as the Empire Bridge Company of Falls City, Nebraska. According to Franklin County Commissioners' records, the Empire Bridge Company first began activity in Franklin County in 1910 and was awarded a contract to construct all of the county's bridges in 1911.

In Nebraska, the pinned Pratt through truss was the bridge of choice for medium-span applications in the early 1900s. Most of the structures erected during this period consisted of single spans, but a number of multiple-span trusses - such as the Republican River Bridge and the North Loup Bridge (VALL06) in Valley County - were built over the wider crossings. Almost all of these early bridges have been since been replaced or substantially altered, however. A regionally important crossing in southern Nebraska, the Republican River Bridge is historically and technologically significant as a well-preserved example of this now uncommon vehicular bridge type.

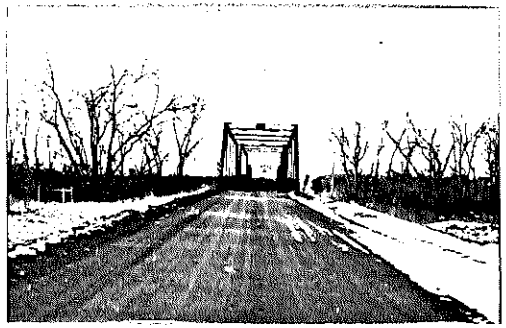
NAME(S) OF STRUCTURE

Republican River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003104705; Proceedings of the Franklin County Commissioners, located in Franklin County Courthouse, Franklin, Nebraska, see following entries in Book 7: 3 May 1910 (page 111), 11 April 1911, (page 144); field inspection by Demian Hess, 23 January 1990.

INVENTORIED BY

Demian Hess

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Campbell Bridge [Little Blue River Bridge] FRAN03
NDOR: C003104705P

DATE(S) OF CONSTRUCTION
ca.1925

LOCATION
county road over the Little Blue River; S24, T4N, R13W
north edge of Campbell; Franklin County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 22)

CONDITION
good

OWNER
Franklin County

span number:	1	superstructure:	steel, 3-panel, rigid-connected Pratt pony truss
span length:	60.0'	substructure:	concrete abutments with sloped, flared wingwalls
total length:	62.0'	floor/decking:	concrete deck over I-beam stringers
roadway wdt.:	approx. 20'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: back-to-back channels with battens; vertical: 4 angles with battens; diagonal: 2 angles with battens; floor beam: I-beam bolted to bottom of vertical; bottom lateral: cross-braced circular-section eyerods; railing: 2 channels bolted to verticals; lighting: concrete lampposts set on the corners of the abutments, originally fitted for gas-lighting

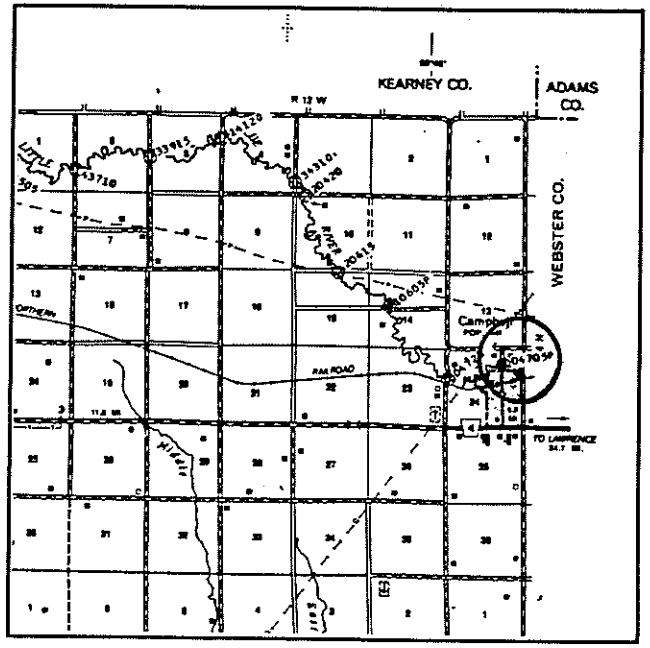
This bridge carries a gravel-surfaced county road over the Little Blue River. It is located on the north line of the Town of Campbell, in Section 24, T4N, R13W, North Franklin Township. Supported by concrete abutments, the bridge is a single-span, riveted Pratt pony truss, with a concrete deck. Concrete lampposts are set on each corner of the abutments; they are square in plan with chamfered corners and stand approximately 7 feet in height. The posts were reportedly first fitted for gas lighting. The bridge has good historical integrity, being in good physical condition and largely unaltered. The date of the bridge is not known, although its concrete abutments and deck suggest that it was built after 1911. According to Franklin County Commissioners' records, concrete was first used in 1911 to construct culverts and bridge piers. The first concrete bridge in the county appears to have been built in 1913 using state plans. By 1919, concrete was widely used in county bridges. In 1922, the state prepared standard plans for a 35-foot, 3-panel, riveted, Pratt pony truss with concrete deck which is similar to the Campbell Bridge. A state plan prepared in 1913 is also similar, but differs in the method of connecting stringers to floor beams. Given the similarities, the Campbell Bridge may have been constructed sometime in the mid 1920s. At that time, the county's primary bridge builder was Samuel F. Walter, who may have also constructed this bridge.

The superstructure of this bridge is typical of state designed pony trusses built in the 1920s. The concrete lightposts, however, are unusual.

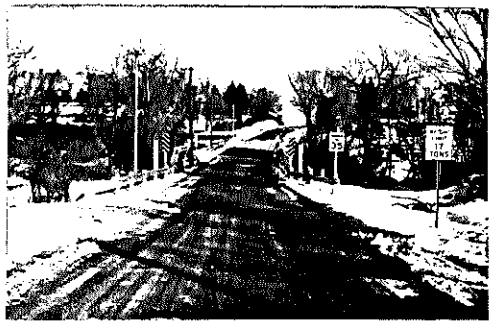
NAME(S) OF STRUCTURE

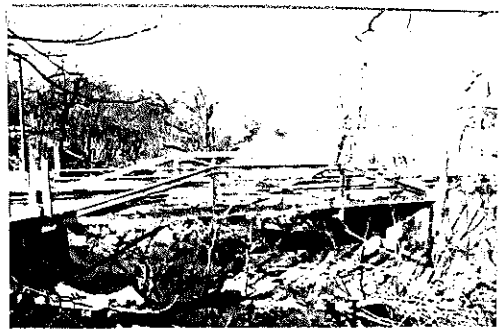
Campbell Bridge [Little Blue River Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003104705P; field inspection by Demian Hess, 23 January 1990; State of Nebraska, Department of Public Works, "Standard Design . . . 35 ft. pony truss, 16'-18'-20' roadway, concrete floor," revised 1 November 1922, plan number 1826, in Nebraska Department of Roads, Bridge Division; Proceedings of the Franklin County Commissioners, 1911-1919, located in Franklin County Courthouse, Franklin, Nebraska; field inspection by Demian Hess, 23 January 1990.

INVENTORIED BY

Demian Hess

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Little Blue River Bridge
NDOR: C003110605P

FRAN04

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over the Little Blue River; S14, T4N, R13W
1.5 miles northwest of Campbell; Franklin County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 19)

CONDITION
good

OWNER
Franklin County

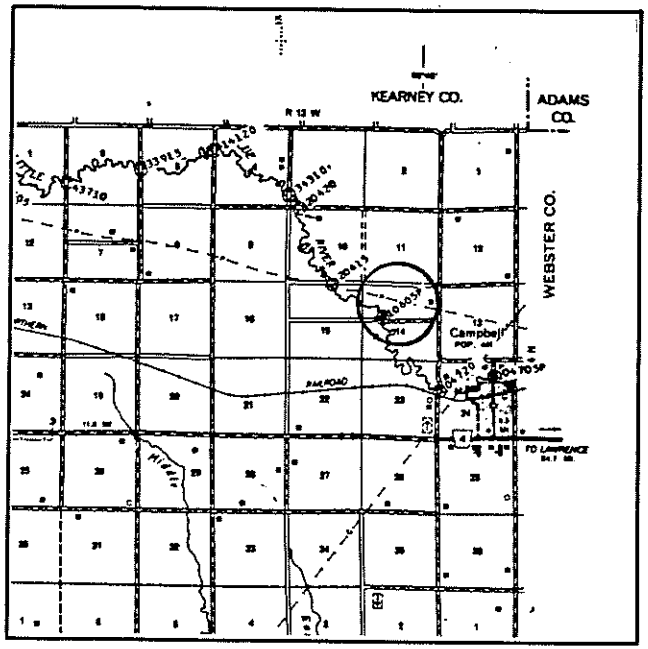
span number:	1	superstructure:	steel, 2-panel, pin-connected Pratt half-hip pony truss
span length:	36.0'	substructure:	steel pile bent abutments with steel plate back and wing walls
total length:	37.0'	floor/decking:	steel plate over I-beam stringers
roadway wdt.:	15.8'	other features:	upper chord: back-to-back channels with cover plate and battens; lower chord: 2 eyebars; vertical: 4 angles with lacing; diagonal: 2 eyebars; floor beam: I-beam, riveted to angle which is bolted to hanger plate - hanger plate riveted to bottom of vertical; bottom lateral: cross-braced circular-section eyerods; railing: lattice

This bridge carries a gravel-surfaced county road over the Little Blue River on the half-section line in Section 14, T4N, R13W, North Franklin Township. The structure is a 2-panel, pinned Pratt half-hip pony truss, supported by steel pile bent abutments. The bridge has good historical integrity, being in good physical condition and having no major alterations. Based on its narrow roadway, pinned construction, and half-hip design, the bridge probably dates to ca.1910.

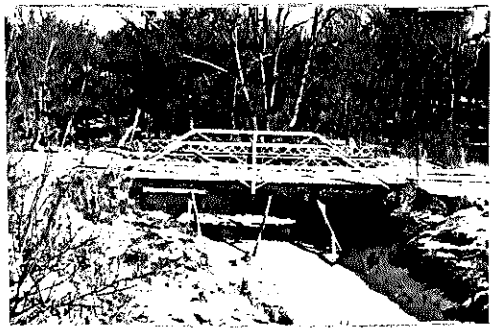
This structure is one of the shorter examples of the many half-hip Pratt pony trusses built in Nebraska in the 1910s.

NAME(S) OF STRUCTURE
Little Blue River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003110605P; Proceedings of the Franklin County Commissioners, 1910-1911, located in Franklin County Courthouse, Franklin, Nebraska; field inspection by Demian Hess, 23 January 1990.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Thompson Creek Bridge
NDOR: C003114320P

FRAN05

DATE(S) OF CONSTRUCTION
ca.1925

LOCATION
county road over Thompson Creek; S22, T4N, R13W
2 miles north of Riverton; Franklin County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 27)

CONDITION
good

OWNER
Franklin County

span number: 1
span length: 100.0'
total length: 136.0'
roadway wdt.: 16.0'

superstructure: steel, 5-panel, rigid-connected Pratt pony truss
substructure: steel pile bent abutments and pier, timber back- and flared wing walls
floor/decking: timber deck over I-beam stringers
other features: upper chord: back-to-back channels with cover plate and lacing; lower chord: back-to-back channels with battens; vertical: 4 angles with battens; diagonal: 2 angles with battens; floor beam: I-beam, riveted to angle which is bolted to bottom of vertical; bottom lateral: 4 angles tied at the center by a gusset plate; railing: 2 channel rails bolted to channel posts

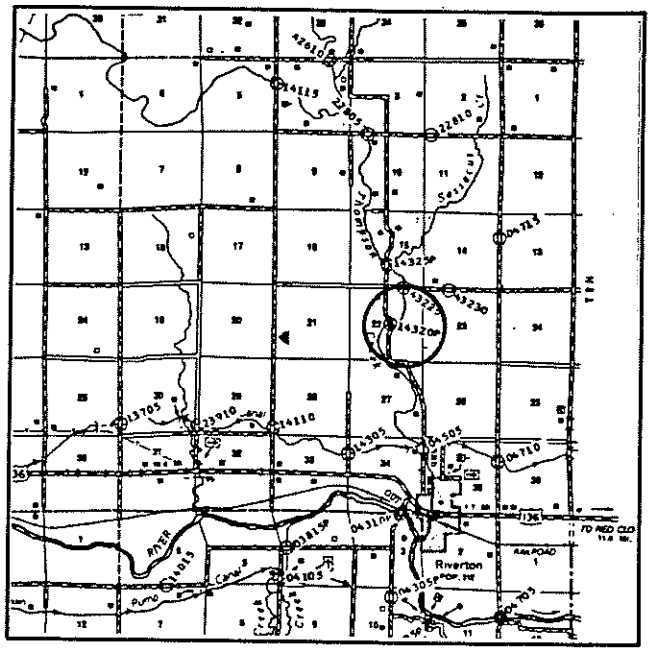
This bridge carries a gravel-surfaced county road over Thompson Creek in the center of Section 22, T4N, R13W, Grant Township. It consists of a bolted Pratt pony truss with a single steel stringer span on the south approach. Both truss and stringer spans rest on bolted, steel pile bent abutments and piers. Based on its 16-foot roadway and bolted construction, the bridge probably dates to ca.1925. The county adopted state bridge plans in 1913, and so it is likely that this bridge was also based on a state design. The structure may have been built by Samuel F. Walter, who was the primary bridge builder in the county throughout the 1920s. Since its completion, the Thompson Creek Bridge has carried traffic in essentially unaltered condition.

This structure is typical of the many state- standard pony trusses built in Nebraska during the 1920s.

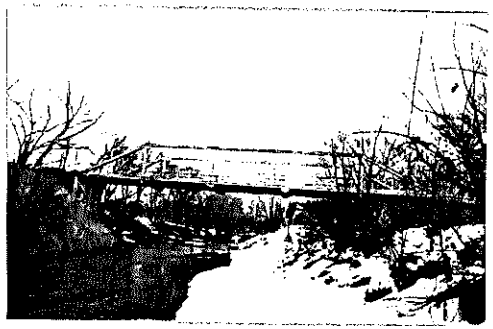
NAME(S) OF STRUCTURE

Thompson Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003114320P; Proceedings of the Franklin County Commissioners, 1913, 1922-1924, located in Franklin County Courthouse, Franklin, Nebraska; field inspection by Demian Hess, 22 January 1990.

INVENTORIED BY

Demian Hess

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Franklin Bridge [Republican River Bridge] FRAN06
NDOR: S010 00548

DATE(S) OF CONSTRUCTION
1932 and 1935

LOCATION
State Highway 10 over the Republican River; S6, T1N, R14W / S1, T1N, R15W
1 mile south of Franklin; Franklin County, Nebraska

USE (ORIGINAL / CURRENT)
highway bridge / highway bridge

RATING NRHP eligible (score: 60)

CONDITION
good

OWNER
Nebraska Department of Roads

span number:	3	superstructure:	steel, 10-panel, rigid-connected Warren pony truss with polygonal upper chord
span length:	100.0'	substructure:	concrete abutments with flared, sloped wings and solid concrete piers
total length:	726.0'	floor/decking:	concrete slab deck over steel stringers
roadway wdt.:	23.0'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: back-to-back channels with battens; vertical: wide flange; diagonal: wide flange; floor beam: I-beam riveted to angle which is riveted to bottom of vertical; bottom lateral: back-to-back angles tied at center of panel by gusset plate; railing: angle rail and posts mounted on curb

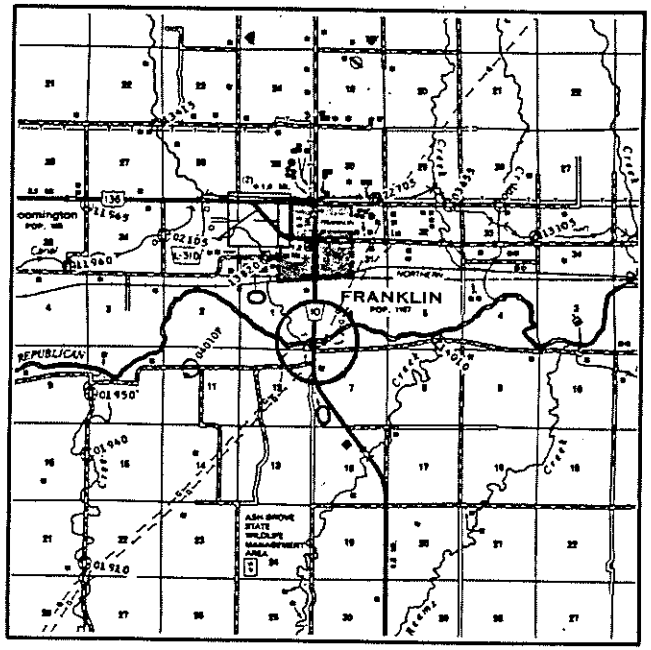
The Franklin Bridge carries State Highway 10 over the Republican River south of Franklin. The bridge consists of three 100-foot, Warren pony trusses with polygonal top chords, and seven deck steel girder approach spans (two located south of the main spans, and five located to the north). In 1932, the state designed the Franklin Bridge and contracted its construction under Project 328-A to the Koehler Construction Company. The St. Joseph Structural Steel Company fabricated the superstructure. As originally built, the bridge was composed of three polygonal Warren pony trusses, and only three approach spans (one to the south, and two to the north). In 1935, however, a devastating flood swept down the Republican River. In his biennial report, the district highway engineer stated that "notwithstanding the sustained tremendous forces exerted on [the Franklin Bridge]..., the major portion of it stood firm. However, the south abutment and the first south pier finally collapsed and the two south spans [i.e., the south approach span and southernmost truss] were swallowed by the flood." Rather than hire a contractor, the state highway department itself repaired the bridge. The department replaced the lost truss with one of identical design fabricated by the Omaha Structural Steel Works and constructed two new approach spans on the south and three on the north. The total cost of repairs was $59,000. No other alterations appear to have been made since 1935.

The Nebraska highway department eschewed Warren truss configurations in favor of the Pratt truss throughout the 1910s and 1920s. In the early 1930s, however, the Bureau designed a handful of bridges using Warrens with polygonal top chords for its long-span pony trusses. The West Blue River Bridge near Dorchester, the Ashland Bridge, the Arlington Bridge, the Nemaha River Bridge near Auburn and the Franklin Bridge were the most notable examples of this type built between 1931 and 1936. Of these, only the Arlington (SAUN25) and the Franklin Bridges remain intact. Although adopted as a standard design in other states, the polygonal Warren truss was never used extensively in Nebraska. The Franklin Bridge is thus technologically noteworthy as the sole remaining example in the state of this formative engineering exercise.

NAME(S) OF STRUCTURE

Franklin Bridge [Republican River Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number S010 00548; Department of Public Works, **Nineteenth Biennial Report**, 1931-32, page 98; Department of Roads and Irrigation, **Twentieth Biennial Report**, 1933-34, page 97; Department of Roads and Irrigation, **Twenty-First Biennial Report**, 1935-36, pages 56-60, 75-76, 128-130; also refer to the following bridge plans, all on file in the Bridge Division, Nebraska Department of Roads: Department of Public Works, "3-60' Deck Steel Girder Spans, 3-100' Pony Truss Spans," 24 September 1932, plan number 328-A-1; Shop Plan Number 8604, dated 1932; Department of Roads and Irrigation, "402' Multiple Span Bridge Extension to 322' Bridge," 30 August 1935, plan number ER-1-1; Shop Plan Number 8870, dated 1935; field inspection by Demian Hess, 22 January 1990.

INVENTORIED BY	**AFFILIATION**	**DATE**
Demian Hess	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Lime Creek Bridge
NDOR: C003205505P

FRON01

DATE(S) OF CONSTRUCTION
ca.1905

LOCATION
county road over Lime Creek; S15, T5N, R26W
11.4 miles southeast of Stockville; Frontier County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 28)

CONDITION
fair

OWNER
Frontier County

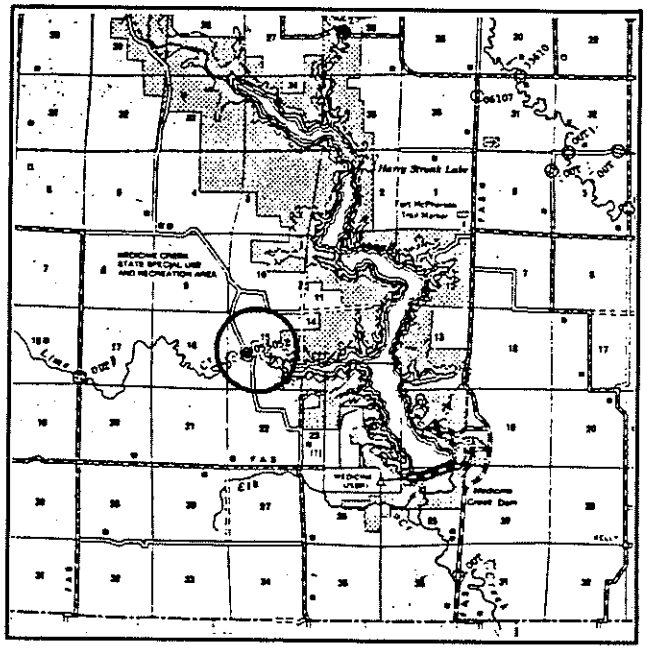
span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt half-hip pony truss
span length:	54.0'	substructure:	steel pile bent abutments and piers, with timber wingwalls
total length:	80.0'	floor/decking:	timber decking over I-beam stringers
roadway wdt.:	15.6'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 punched rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 looped rectangular eyebars; counter: 1 round eyebars with turnbuckle; floor beam: I-beam, U-bolted to lower chord pin at vertical; guardrail: lattice

This small-scale bridge carries a gravel-surfaced county road across Lime Creek, southeast of Stockville, the county seat, in Garfield Township. The structure consists of a single pinned Pratt half-hip pony truss, flanked on each side by a timber stringer approach span. Steel pile bent piers and abutments form the substructure. Although contemporary Frontier County records do not mention this structure specifically, the truss's detailing and dimensions suggest a fabrication date around 1905. The Standard Bridge Company of Omaha held the county's annual contracts from 1903, when Frontier County began building steel spans, until the 1920s. Made up of steel components rolled by the Cambria Steel Company of Pittsburgh, this truss displays the earmarks of a Standard Bridge Company structure. Essentially unaltered, it retains an average degree of physical integrity.

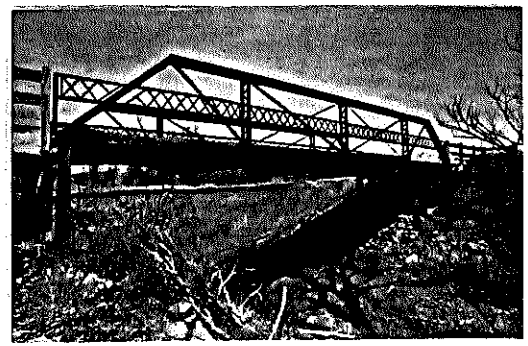
The Standard Bridge Company, like many midwestern bridge erectors, marketed the Pratt half-hip pony truss extensively in the early 1900s. Lacking a vertical at the hip connection, it was slightly lighter - and thus cheaper to fabricate - than the standard Pratt truss. The state engineer's office did not adopt the half-hip design as a state standard, however, and as the counties began using the state standards increasingly in the mid-1910s, erection of half-hip ponies decreased rapidly. Nevertheless, numerous half-hip trusses remain in use on Nebraska's secondary roads today. With its construction history largely undocumented, the Lime Creek Bridge is not one of the more noteworthy examples.

NAME(S) OF STRUCTURE
Lime Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003205505P; Proceedings of the Frontier County Commissioners, 1899-1921, located at Frontier County Courthouse, Stockville, Nebraska; Frontier County Bridge Record, located at Frontier County Courthouse, Stockville, Nebraska; field inspection by Clayton Fraser, 31 March 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Muddy Creek Bridge
NDOR: C003206905P

FRON02

DATE(S) OF CONSTRUCTION
1910

LOCATION
county road over West Muddy Creek; S14, T6N, R25W
13.0 miles southwest of Eustis; Frontier County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 36)

CONDITION
good

OWNER
Frontier County

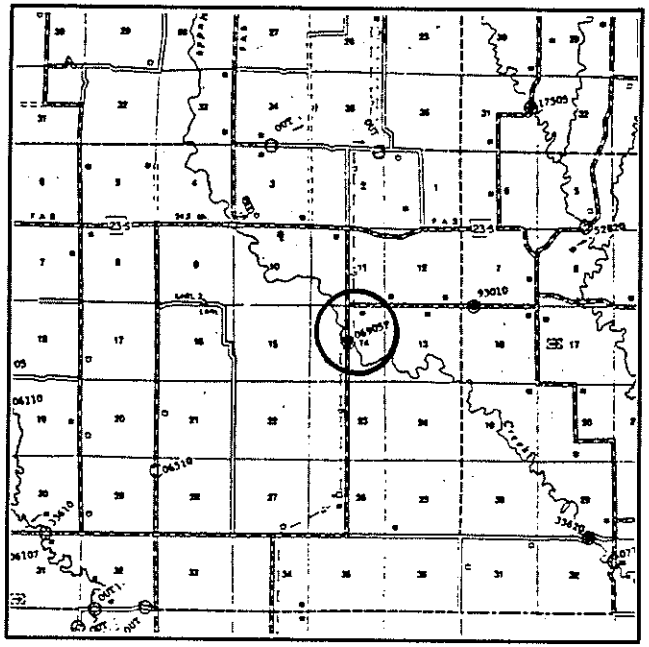
span number:	1	superstructure:	steel, 4-panel, pin- / rigid-connected Pratt pony truss
span length:	60.0'	substructure:	timber pile bent abutments, pier and wingwalls
total length:	80.0'	floor/decking:	timber decking over steel stringers
roadway wdt.:	16.0'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 punched rectangular eyebars; vertical: 4 angles with batten plates; diagonal: 2 punched rectangular eyebars; counter: 1 round eyebar with turnbuckle; floor beam: I-beam, field bolted to vertical below lower chord; guardrail: none

This small-scale bridge carries a gravel-surfaced county road across West Muddy Creek southwest of Eustis, in Earl Township. The structure consists of a single pinned Pratt pony truss, flanked on one side by a timber stringer approach span. Timber pile bent abutments and pier form the substructure. The truss was fabricated from steel rolled by the Illinois Steel Company, using a standard plan developed by the Nebraska State Engineer's Office. Frontier County records indicate that the Muddy Creek Bridge was erected in 1910 by the Standard Bridge Company of Omaha. Essentially unaltered, it retains an average degree of physical integrity.

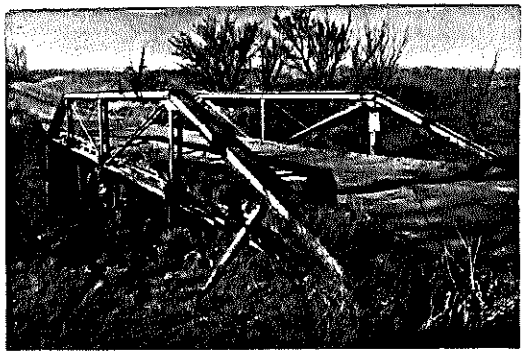
The state engineer's office developed standard plans for bridges as early as 1905 and distributed them to the counties, updating the designs periodically to reflect technological improvements. One of the most widely used standards in the 1910s was the 60-foot pony truss, which featured pinned connections with bolted gusset plates at the upper chords to form a pin-/ rigid-connected hybrid. The Muddy Creek Bridge is one of many such standard designs still carrying traffic on Nebraska's secondary roads. Built in 1910 over a minor watercourse in rural Frontier County, it is one of the less distinguished examples of this common vehicular truss configuration.

NAME(S) OF STRUCTURE
Muddy Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003206905P; Proceedings of the Frontier County Commissioners, 1899-1921, located at Frontier County Courthouse, Stockville, Nebraska; Frontier County Bridge Record, located at Frontier County Courthouse, Stockville, Nebraska; field inspection by Clayton Fraser, 31 March 1989.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C003217505

FRON03

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
county road over East Muddy Creek; S31/32, T7N, R24W
9.4 miles southwest of Eustis; Frontier County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 27)

CONDITION
fair

OWNER
Frontier County

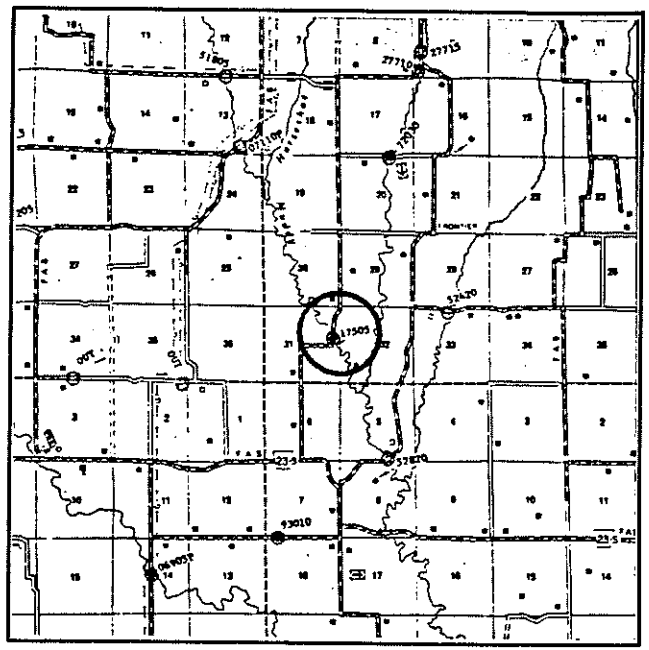
span number:	1	superstructure:	steel, 3-panel, pin- / rigid-connected Pratt pony truss
span length:	40.0'	substructure:	steel pile bent abutments and pier, with timber wingwalls
total length:	47.0'	floor/decking:	timber decking over steel stringers
roadway wdt.:	15.9'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 looped rectangular eyebars; vertical: 4 angles with batten plates; diagonal: 2 looped square eyebars with turnbuckles; lateral bracing: round bar with threaded ends; floor beam: I-beam, field bolted to vertical below lower chord; guardrail: steel pipe

This small-scale bridge carries a gravel-surfaced county road across East Muddy Creek southwest of Eustis, in Clear Water Township. The structure consists of a single pinned Pratt pony truss, approached on one side by a timber stringer span. Steel pile bent piers and abutments form the substructure. Although contemporary Frontier County records do not mention this structure specifically, the truss's detailing and dimensions suggest a construction date around 1915, a period in which Frontier County contracted exclusively with the Standard Bridge Company of Omaha for steel bridges. The truss was fabricated from steel rolled by the Bethlehem Steel Company, using a standard plan developed by the Nebraska State Engineer. Essentially unaltered, it retains an average degree of physical integrity.

This bridge is an undistinguished example of a common standard-plan, vehicular truss type.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003217505; Proceedings of the Frontier County Commissioners, 1899-1921, located at Frontier County Courthouse, Stockville, Nebraska; Frontier County Bridge Record, located at Frontier County Courthouse, Stockville, Nebraska; field inspected by Clayton Fraser, 31 May 1989.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Mitchell Creek Bridge
NDOR: C003223403P

FRON04

DATE(S) OF CONSTRUCTION
ca.1905

LOCATION
county road over Mitchell Creek; S26, T6N, R26W
9.1 miles southeast of Stockville; Frontier County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 28)

CONDITION
fair

OWNER
Frontier County

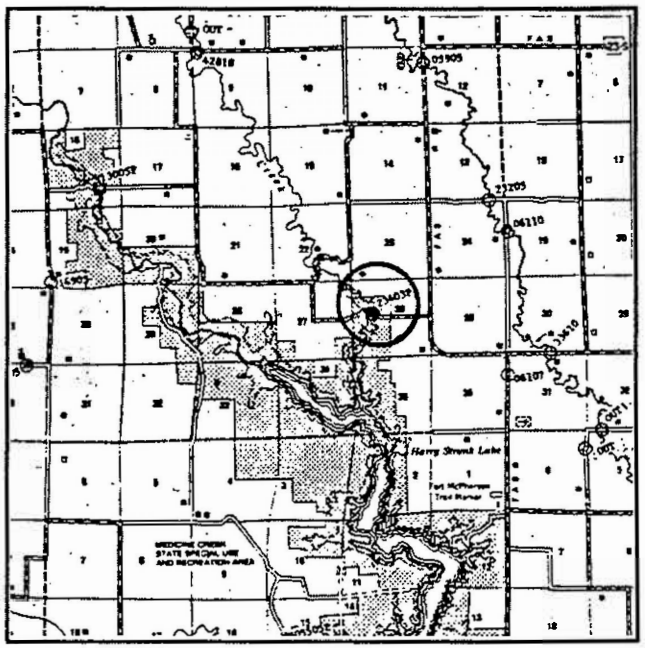
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt half-hip pony truss
span length:	40.0'	substructure:	steel pile bent abutment and piers, with timber wingwalls
total length:	61.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	15.7'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 punched rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 looped rectangular eyebars; counter: 1 round eyerod with turnbuckle; floor beam: I-beam, U-bolted to lower chord pin at vertical; guardrail: steel angle

This small-scale bridge carries a gravel-surfaced county road across Mitchell Creek, southeast of Stockville, the county seat, in Lower Medicine Township. The structure consists of a single pinned Pratt half-hip pony truss, flanked on each side by a timber stringer approach span. Steel pile bent piers and abutments form the substructure. Although contemporary Frontier County records do not mention this structure specifically, the truss's detailing and dimensions suggest a fabrication date around 1905. The Standard Bridge Company of Omaha held the county's annual contracts from 1903, when Frontier County began building steel spans, until the 1920s. Essentially unaltered, it retains an average degree of physical integrity.

The Standard Bridge Company, like many midwestern bridge erectors, marketed the Pratt half-hip pony truss extensively in the early 1900s. Lacking a vertical at the hip connection, it was slightly lighter - and thus cheaper to fabricate - than the standard Pratt truss. The state engineer's office did not adopt the half-hip design as a state standard, however, and as the counties began using the state standards increasingly in the mid-1910s, erection of half-hip ponies decreased rapidly. Nevertheless, numerous half-hip trusses remain in use on Nebraska's secondary roads today. With its construction history largely undocumented, the Mitchell Creek Bridge is not one of the more noteworthy examples.

NAME(S) OF STRUCTURE
Mitchell Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003223403P; Proceedings of the Frontier County Commissioners, 1899-1921, located at Frontier County Courthouse, Stockville, Nebraska; Frontier County Bridge Record, located at Frontier County Courthouse, Stockville, Nebraska; field inspection by Clayton Fraser, 31 May 1989.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C003223605

FRON05

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
county road over intermittent stream; S25/36, T6N, R27W
6.4 miles southeast of Stockville; Frontier County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 27)

CONDITION
fair

OWNER
Frontier County

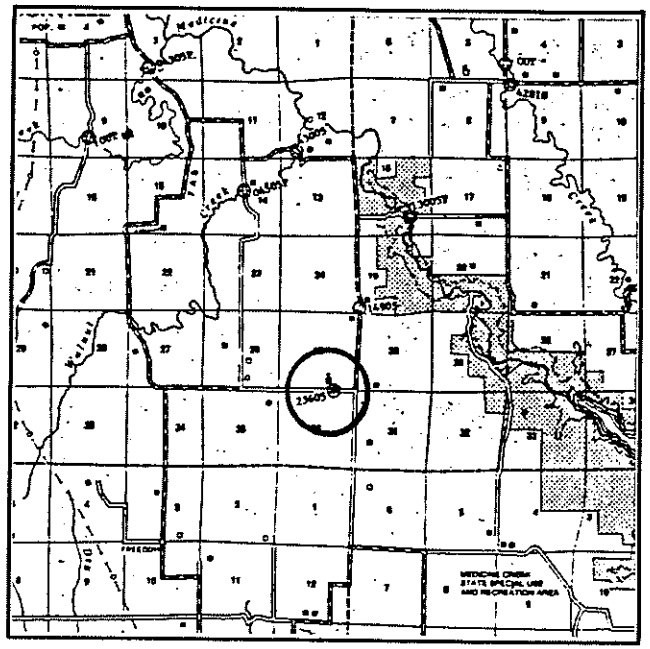
span number:	1	superstructure:	steel, 3-panel, pin- / rigid-connected Pratt pony truss
span length:	40.0'	substructure:	steel pile bent abutments, with timber wingwalls
total length:	42.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	15.8'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 punched rectangular eyebars; vertical: 4 angles with batten plates; diagonal: 2 punched rectangular eyebars; counter: 1 round eyebar with turnbuckle; floor beam: I-beam, field bolted to vertical below lower chord; guardrail: steel angle

This small-scale bridge carries a gravel-surfaced county road across an intermittent stream southeast of Stockville, in Sherman Township. The structure consists of a single pinned Pratt pony truss, supported by steel pile bent abutments. Although contemporary Frontier County records do not mention this structure specifically, the truss's detailing and dimensions suggest a construction date around 1915, a period in which Frontier County contracted exclusively with the Standard Bridge Company of Omaha for steel bridges. The truss was fabricated from steel rolled by the Lackawanna Steel Company, using a standard plan developed by the Nebraska State Engineer. Essentially unaltered, it retains an average degree of physical integrity.

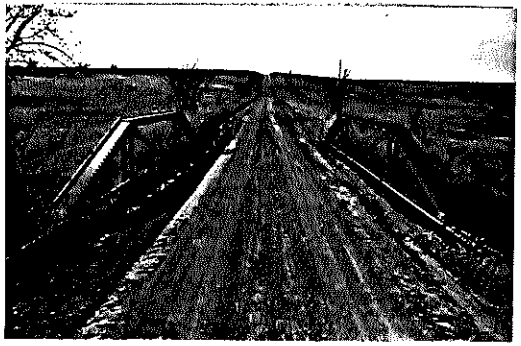
With its construction history largely undocumented, this bridge is an undistinguished example of a common standard-plan, vehicular truss type.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003223605; Proceedings of the Frontier County Commissioners, 1899-1921, located at Frontier County Courthouse, Stockville, Nebraska; Frontier Country Bridge Record, located at Frontier County Courthouse, Stockville, Nebraska; field inspected by Clayton Fraser, 31 May 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Plum Creek Bridge
NDOR: C003230425

FRON06

DATE(S) OF CONSTRUCTION
ca.1905

LOCATION
county road over Plum Creek; S3/10, T6N, R25W
6.4 miles northwest of Eustis; Frontier County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 28)

CONDITION
good

OWNER
Frontier County

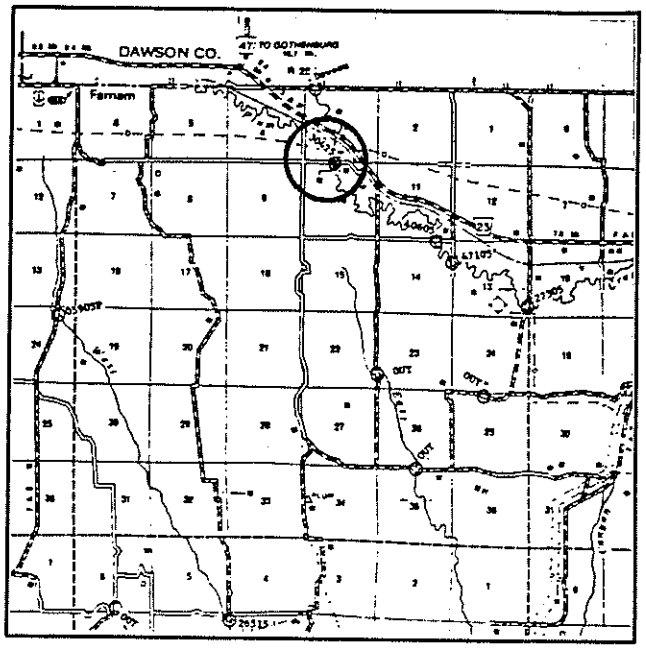
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt half-hip pony truss
span length:	40.0'	substructure:	steel pile bent abutments and pier, with timber wingwalls
total length:	56.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	16.0'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 looped rectangular eyebars; counter: 2 round eyebars; lateral bracing: round bar with threaded ends; floor beam: I-beam, U-bolted to lower chord pin at vertical; guardrail: none

The Plum Creek Bridge is located northwest of Eustis in Plum Creek Township. It carries an unpaved county road over the creek between Sections 3 and 10, in Township 6 North, Range 25 West. Comprised of steel components rolled by the Cambria Steel Company of Pittsburgh, the details and dimensions of this truss indicate a fabrication date of ca.1905, a period in which the Frontier County Commissioners were awarding annual bridge construction contracts to the Standard Bridge Company of Omaha. The Plum Creek Bridge displays typical pin-connected configuration and detailing of Standard's standardized trusses.

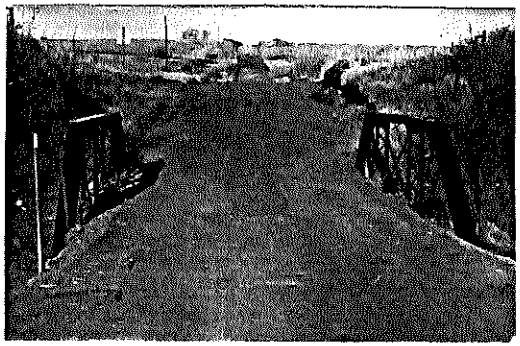
Displaying an average degree of physical integrity, the Plum Creek Bridge is a relatively undistinguished example of one of Nebraska's most common truss configurations.

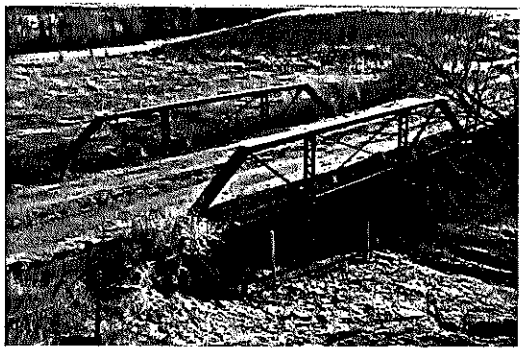
NAME(S) OF STRUCTURE
Plum Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003230425; Proceedings of the Frontier County Commissioners, 1899-1921, located at Frontier County Courthouse, Stockville, Nebraska; Frontier County Bridge Record, located at Frontier County Courthouse, Stockville, Nebraska; field inspection by Clayton Fraser, 31 March 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Muddy Creek Bridge
NDOR: C003233405P

FRON07

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
county road over East Muddy Creek; S28, T6N, R24W
14.7 miles south Eustis; Frontier County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 30)

CONDITION
good

OWNER
Frontier County

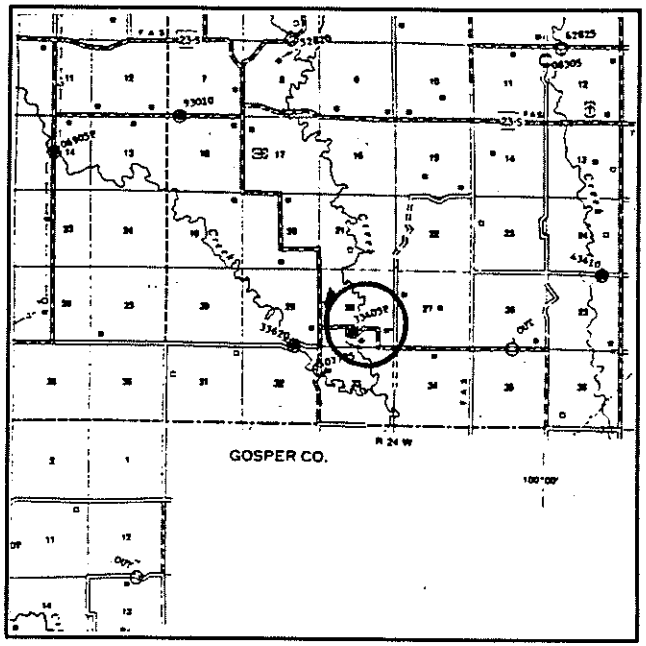
span number:	1	superstructure:	steel, 4-panel, pin- / rigid-connected Pratt pony truss
span length:	60.0'	substructure:	steel bent pile abutments and pier, with timber wingwalls
total length:	77.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	15.7'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 punched rectangular eyebars; vertical: 4 angles with batten plates; diagonal: 2 punched rectangular eyebars; lateral bracing: round bar with threaded ends; floor beam: I-beam, field-bolted to vertical below lower chord; guardrail: 2 angles

This small-scale bridge carries a gravel-surfaced county road across East Muddy Creek, south of Eustis, in Muddy Township. The structure consists of a single pinned Pratt pony truss, approached on one side by a timber stringer span. Steel pile bent piers and abutments form the substructure. Although contemporary Frontier County records do not mention this structure specifically, the truss's detailing and dimensions suggest a fabrication date around 1915. The Standard Bridge Company of Omaha held the county's annual contracts from 1903, when Frontier County began building steel spans, until the 1920s. Comprised of steel components rolled in Pittsburgh by the Cambria Steel Company, the truss was fabricated using a standard design developed by the Nebraska State Engineer. The Muddy Creek Bridge is essentially unaltered, and it retains an average degree of physical integrity.

The state engineer's office developed standard plans for bridges as early as 1905 and distributed them to the counties, updating the designs periodically to reflect technological improvements. One of the most widely used standards in the 1910s was the 60-foot pony truss, which featured pinned connections with bolted gusset plates at the upper chords to form a pin-/ rigid-connected hybrid. The Muddy Creek Bridge is one of many such standard designs still carrying traffic on Nebraska's secondary roads. With its construction history largely undocumented, it is one of the less distinguished examples of this common vehicular truss configuration.

NAME(S) OF STRUCTURE
Muddy Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003233405P; Proceedings of the Frontier County Commissioners, 1899-1921, located at Frontier County Courthouse, Stockville, Nebraska; Frontier County Bridge Record, located at Frontier County Courthouse, Stockville, Nebraska; field inspection by Clayton Fraser, 31 March 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Muddy Creek Bridge
NDOR: C003233620

FRON08

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
county road over Muddy Creek; S29/32, T6N, R24W
14.9 miles southwest of Eustis; Frontier County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 27)

CONDITION
good

OWNER
Frontier County

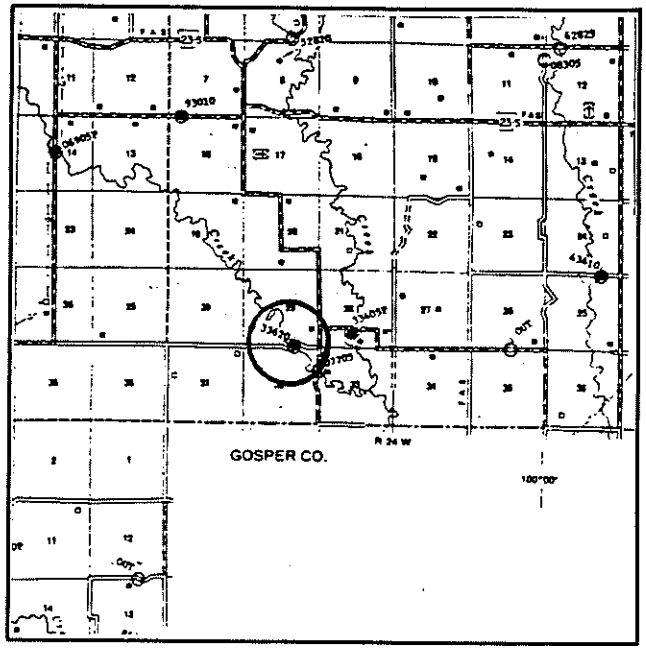
span number:	1	superstructure:	steel, 4-panel, pin- / rigid-connected Pratt pony truss
span length:	50.0'	substructure:	steel pile bent abutments, with timber wingwalls
total length:	52.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	15.8'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 punched rectangular eyebars; vertical: 4 angles with batten plates; diagonal: 2 punched rectangular eyebars; lateral bracing: round bar with threaded ends; floor beam: I-beam, field-bolted to vertical below lower chord; guardrail: 2 angles

Located some 15 miles southwest of Eustis, in sparsely settled Muddy Township, this small-scale bridge carries an unpaved section-line road across Muddy Creek. Built ca.1915 by the Standard Bridge Company of Omaha, the truss was fabricated from a standard design of the state engineer's office using standard steel components rolled in Pittsburgh by the Cambria Steel Company. The structure retains an average degree of physical integrity.

The Muddy Creek Bridge typifies bridge construction in Frontier County - and Nebraska, generally - in the 1910s. With its modest dimensions and standardized configuration and detailing, it is a representative example of the state's most common truss type, built by one of Nebraska's most prolific bridge erectors.

NAME(S) OF STRUCTURE
Muddy Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003233620; Proceedings of the Frontier County Commissioners, 1899-1921, located at Frontier County Courthouse, Stockville, Nebraska; Frontier County Bridge Record, located at Frontier County Courthouse, Stockville, Nebraska; field inspection by Clayton Fraser, 31 March 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
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Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Elder Creek Bridge
NDOR: C003243410

FRON09

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
county road over Elder Creek; S24/25, T6N, R24W
14.0 miles southeast of Eustis; Frontier County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 27)

CONDITION
good

OWNER
Frontier County

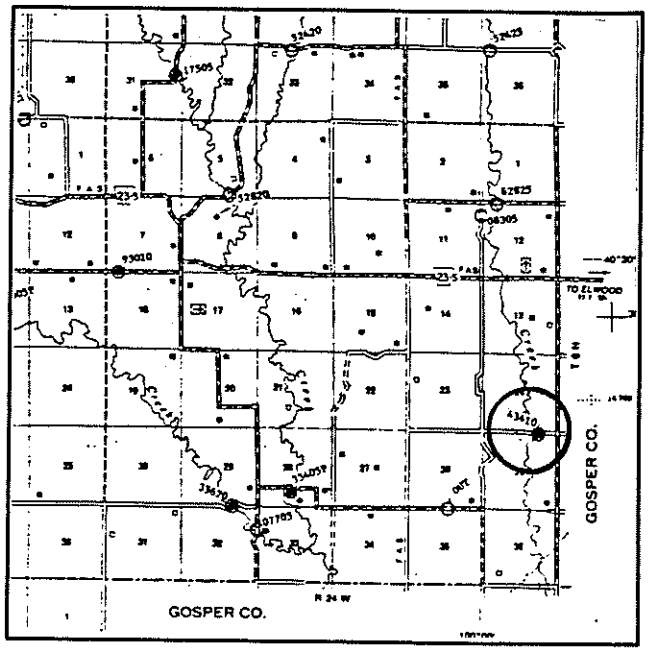
span number:	1	superstructure:	steel, 3-panel pin-/ rigid-connected Pratt pony truss
span length:	40.0'	substructure:	steel pile bent abutments, with timber wingwalls
total length:	42.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	15.7'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 punched rectangular eyebars; vertical: 4 angles with batten plates; diagonal: 2 punched rectangular eyebars; lateral bracing: round bar with threaded ends; floor beam: I-beam, field-bolted to vertical below lower chord; guardrail: 2 channels

This small-scale bridge carries a gravel-surfaced county road across Elder Creek, southeast of Eustis, in Muddy Township. The structure consists of a single pinned Pratt pony truss, supported by steel pile bent piers and abutments. Although Frontier County records do not mention this structure specifically, the truss's detailing and dimensions suggest a fabrication date around 1915. The Standard Bridge Company of Omaha held the county's annual contracts from 1903, when Frontier County began building steel spans, until the 1920s. Comprised of steel components rolled in Pittsburgh by the Cambria Steel Company, the truss was fabricated using a standard design developed by the Nebraska State Engineer's Office. The Elder Creek Bridge is essentially unaltered, and it retains an average degree of physical integrity.

The state engineer developed standard plans for bridges as early as 1905 and distributed them to the counties, updating the designs periodically to reflect technological improvements. One of the most widely used standards in the 1910s was the 60-foot pony truss, which featured pinned connections with bolted gusset plates at the upper chords to form a pin-/ rigid-connected hybrid. The Elder Creek Bridge is one of many such standard designs still carrying traffic on Nebraska's secondary roads. With its construction history largely undocumented, it is one of the less distinguished examples of this common vehicular truss configuration.

NAME(S) OF STRUCTURE
Elder Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003243410; Proceedings of the Frontier County Commissioners, 1899-1921, located at Frontier County Courthouse, Stockville, Nebraska; Frontier County Bridge Record, located at Frontier County Courthouse, Stockville, Nebraska; field inspection by Clayton Fraser, 31 March 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
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DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C003272030

FRON10

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over intermittent stream; S17/20, T7N, R24W
6.8 miles southwest of Eustis; Frontier County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 27)

CONDITION
fair

OWNER
Frontier County

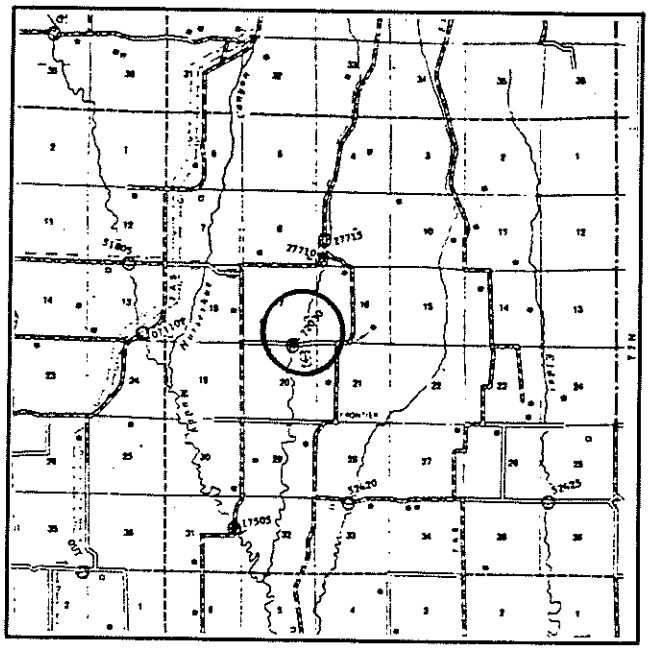
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt half-hip pony truss
span length:	50.0'	substructure:	steel pile bent abutments, with timber wingwalls
total length:	50.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	16.0'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 punched rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 looped rectangular eyebars; counter: 1 round eyerod with turnbuckle; floor beam: I-beam, U-bolted to lower chord pin at vertical; guardrail: none

Consisting of a single 50-foot span, this small-scale pony truss carries a section-line road across an intermittent stream approximately 6.8 miles southwest of Eustis, in Clear Water Township. Contemporary county records are vague regarding references to specific bridges, but physical evidence and general bridge building trends in Frontier County indicate that this structure was erected ca.1910 by the Standard Bridge Company of Omaha, using steel components rolled by the Jones and Laughlin Steel Company in Pittsburgh. The bridge has been altered little since its original construction, and it retains an average degree of physical integrity.

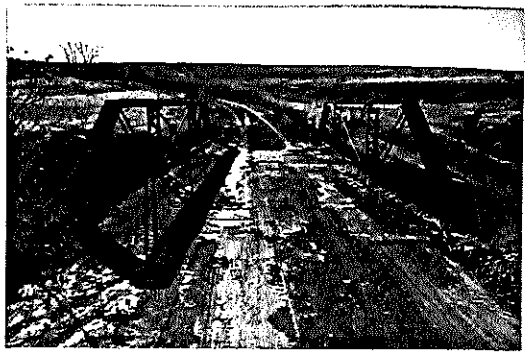
Built during a period of extensive bridge construction in Frontier County by one of the state's most prolific bridge contractors, this bridge is a typical example of a common structural type.

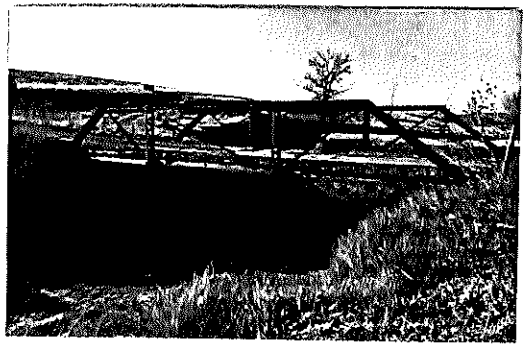
NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003272030; Proceedings of the Frontier County Commissioners, 1899-1921, located at Frontier County Courthouse, Stockville, Nebraska; Frontier County Bridge Record, located at Frontier County Courthouse, Stockville, Nebraska; field inspection by Clayton Fraser, 31 March 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
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Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C003293010

FRON11

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
county road over intermittent stream; S7/18, T6N, R24W
11.8 miles southwest of Eustis; Frontier County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 27)

CONDITION
good

OWNER
Frontier County

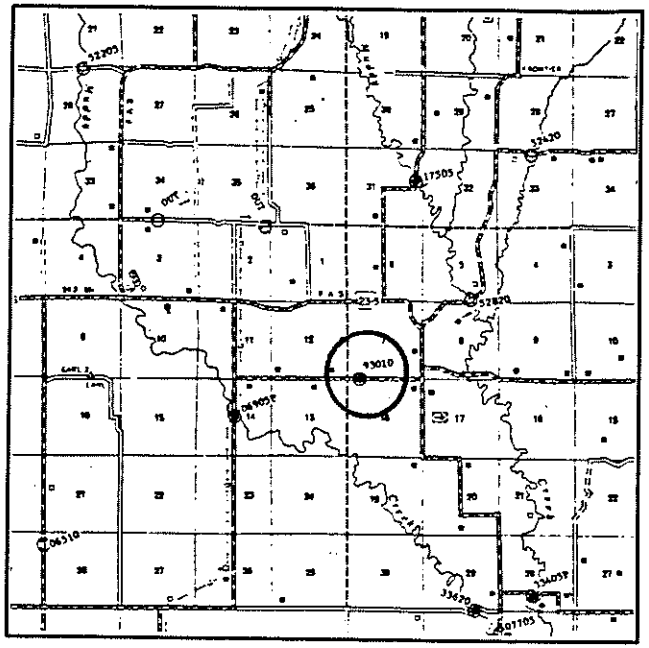
span number:	1	superstructure:	steel, 3-panel, pin- / rigid-connected Pratt pony truss with gussets
span length:	40.0'	substructure:	steel pile bent abutments encased in concrete and timber wingwalls
total length:	42.0'	floor/decking:	timber decking over steel stringers
roadway wdt.:	16.0'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 punched rectangular eyebars; vertical: 4 angles with batten plates; diagonal: 2 punched rectangular eyebars; lateral bracing: round bar with threaded ends; floor beam: I-beam, field-bolted to vertical below lower chord; guardrail: none

This small-scale bridge carries a gravel-surfaced county road across West Muddy Creek southwest of Eustis, in sparsely settled Muddy Township. The structure consists of a single pinned Pratt pony truss, supported by steel pile bent abutments. The truss was fabricated from steel rolled in Pittsburgh by the Lackawanna Steel Company, using a standard plan developed by the Nebraska State Engineer's office. Contemporary Frontier County records do not refer to this bridge specifically, but it appears to have been built ca.1915 by the Standard Bridge Company, the bridge firm that erected virtually all of Frontier County's steel bridges from the time that the county commissioners began contracting for them in 1903 until the 1920s. Essentially unaltered, it retains an average degree of physical integrity.

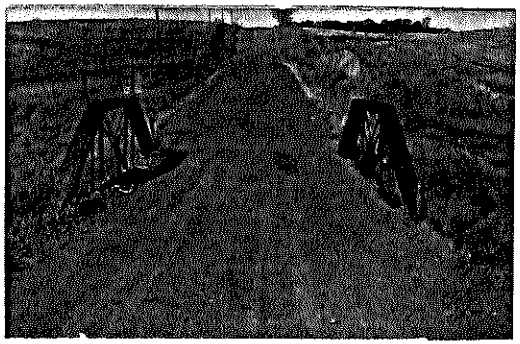
The state engineer developed standard plans for bridges as early as 1905 and distributed them to the counties, updating them periodically to reflect technological improvements. One of the most widely used standard plans in the 1910s was the 40-foot pony truss, which featured pinned connections with bolted gusset plates at the upper chords to form a pin- / rigid-connected hybrid. This bridge is one of many such standard designs still carrying traffic on Nebraska's secondary roads. With its construction history largely undocumented, it is one of the less distinguished examples of this common vehicular truss configuration.

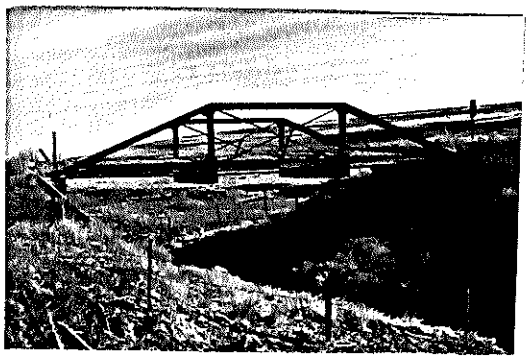
NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003293010; Proceedings of the Frontier County Commissioners, 1899-1921, located at Frontier County Courthouse, Stockville, Nebraska; Frontier County Bridge Record, located at Frontier County Courthouse, Stockville, Nebraska; field inspection by Clayton Fraser, 31 March 1989.

INVENTORIED BY
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AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Medicine Creek Bridge
NDOR: C003300605P

FURN01

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over Medicine Creek; S18, T4N, R25W
2.1 miles northwest of Cambridge; Furnas County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 20)

CONDITION
fair

OWNER
Furnas County

span number:	1	superstructure:	steel, 5-panel, pin-connected Pratt through truss
span length:	84.0'	substructure:	steel pile bent abutments with timber wingwalls
total length:	85.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.9'	other features:	upper chord: 2 channels with lacing; lower chord: 2 punched rectangular eyebars; vertical: 2 channels with lacing; diagonal: 2 looped rectangular eyebars; 1 round eyebar; lateral bracing: round bar; floor beam: I-beam, U-bolted to lower chord pin at vertical; guardrail: 2 angles

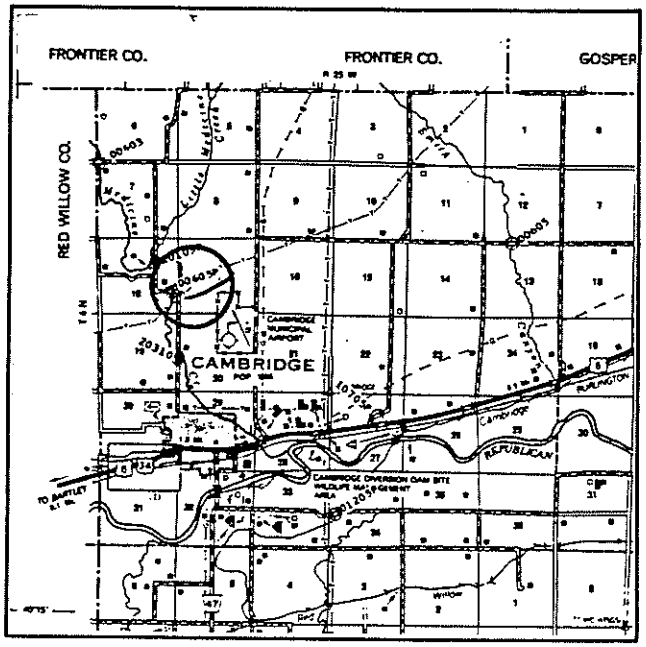
This pin-connected Pratt through truss carries a gravel-surfaced county road over Medicine Creek two miles north of Cambridge. Although contemporary Furnas County records do not mention this structure specifically, the truss's dimensions and details indicate an erection date of ca.1910. The Western Bridge and Construction Company of Omaha held the county's annual bridge construction contracts from 1908 through the 1920s. Made up of steel components rolled by the Carnegie Steel Company, this truss displays the earmarks of a Western Bridge structure. The truss and its steel substructure do not share the same chromachronology, indicating that this span was moved to this location from its earlier position or that the substructure has been replaced entirely.

In Nebraska, the pinned Pratt through truss was the bridge of choice for medium-span applications in the early 1900s. Numerous Pratt throughs were built across the state during this period of intense vehicular bridge construction, and many remain in place today. With its construction history largely undocumented, the Medicine Creek Bridge is not one of the more noteworthy examples.

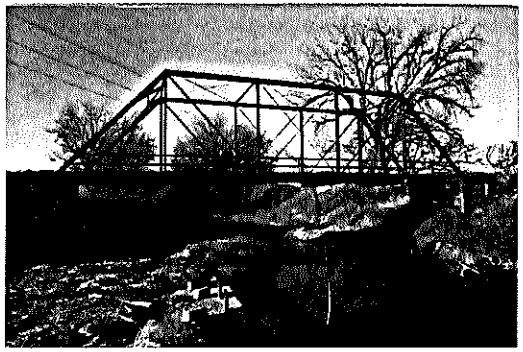
NAME(S) OF STRUCTURE

Medicine Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003300605P; Furnas County Commissioners' Record, 1897 - 1930, located at Furnas County Courthouse, Beaver City, Nebraska; field inspection by Clayton Fraser, 29 March 1989.

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Medicine Creek Bridge
NDOR: C003310105P

FURN02

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
county road over Medicine Creek; S18, T4N, R25W
2.6 miles northwest of Cambridge; Furnas County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 20)

CONDITION
fair

OWNER
Furnas County

span number: 1
span length: 100.0'
total length: 101.0'
roadway wdt.: 15.7'

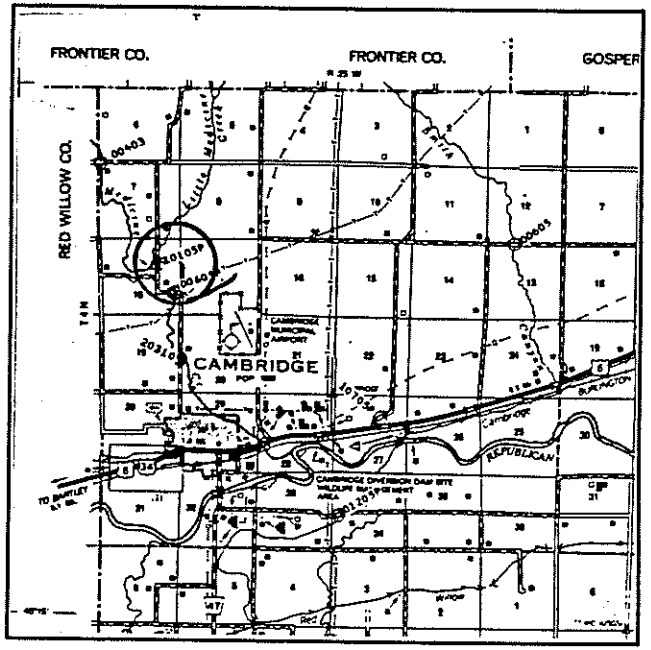
superstructure: steel, 6-panel, pin-connected Pratt through truss
substructure: steel pile bent abutments with timber wingwalls
floor/decking: timber deck over I-beam stringers
other features: upper chord: 2 channels with lacing; lower chord: 2 looped rectangular eyebars; vertical: 2 channels with lacing; diagonal: 2 looped rectangular eyebars; 1 looped round eyebar; lateral bracing: round bars with threaded ends; strut: 2 angles; floor beam: I-beam, U-bolted to lower chord pin at vertical; guardrail: 2 angles

This pin-connected Pratt through truss carries a gravel-surfaced county road over Medicine Creek northwest of Cambridge. Although contemporary Furnas County records do not mention this structure specifically, the truss's dimensions and details indicate an erection date of ca.1910. The Western Bridge and Construction Company of Omaha held the county's annual bridge construction contracts from 1908 through the 1920s. Made up of steel components rolled by Jones and Laughlin and Inland, this truss displays the earmarks of a Western Bridge structure. The truss and its steel substructure share the same chromachronolgy, indicating that this span is located in its original position.

In Nebraska, the pinned Pratt through truss was the bridge of choice for medium-span applications in the early 1900s. Numerous Pratt throughs were built across the state during this period of intense vehicular bridge construction, and many remain in place today. With its construction history largely undocumented, the Medicine Creek Bridge is not one of the more noteworthy examples.

NAME(S) OF STRUCTURE
Medicine Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003310105P; Furnas County Commissioners' Record, 1897 - 1930, located at Furnas County Courthouse, Beaver City, Nebraska; field inspection by Clayton Fraser, 29 March 1989.

INVENTORIED BY
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AFFILIATION
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DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Muddy Creek Bridge
NDOR: C003312915

FURN03

DATE(S) OF CONSTRUCTION
ca.1930

LOCATION
county road over Muddy Creek; S16/17, T4N, R23W
2.1 miles west of Arapahoe; Furnas County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 18)

CONDITION
good

OWNER
Furnas County

span number:	2	superstructure:	steel, 5-panel, rigid-connected Pratt pony truss with 3-panel Pratt pony approach span
span length:	60.0'; 100.0'	substructure:	steel pile bent abutments and pier with timber wingwalls
total length:	165.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	18.0'	other features:	upper chord: 2 channels with lacing; lower chord: 2 channels with batten plates; vertical: 4 angles with batten plates; diagonal: 2 angles with batten plates; lateral bracing: round bars with threaded ends; floor beam: I-beam, field bolted to vertical; guardrail: 1 steel rectangle; endpost-mounted plate: **CAP. 18 TONS 12915 1974**

Situated over Muddy Creek west of Arapahoe, this bridge consists of two dissimilar trusses. The capacity sign suggests that these spans were assembled here - probably from other sites - in 1974. Other than the apparent move, both trusses display a high degree of structural integrity.

Made up of two spans probably assembled from other structures, the Muddy Creek Bridge lacks any appreciable degree of historical significance or integrity.

NAME(S) OF STRUCTURE
Muddy Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION

LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003312915; Furnas County Commissioners' Record, 1897 - 1930, located at Furnas County Courthouse, Beaver City, Nebraska; field inspection by Clayton Fraser, 29 March 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Medicine Creek Bridge
NDOR: C003320310

FURN04

DATE(S) OF CONSTRUCTION
ca.1925

LOCATION
county road over Medicine Creek; S19/20, T4N, R25W
1.5 miles north of Cambridge; Furnas County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 37)

CONDITION
good

OWNER
Furnas County

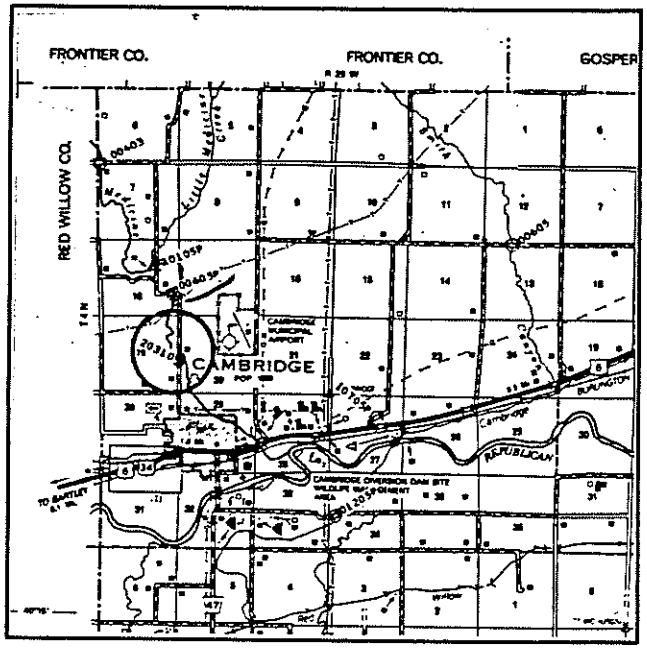
span number:	1	superstructure:	steel, 5-panel, rigid-connected Pratt pony truss
span length:	100.0'	substructure:	steel pile bent abutments with timber wingwalls
total length:	130.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.8'	other features:	upper chord: 2 channels with lacing; lower chord: 2 channels with batten plates; vertical: 2 angles with batten plates; diagonal: 2 angles with batten plates; lateral bracing: round bar with threaded ends; floor beam: I-beam bolted to vertical; guardrail: 2 angles

Located north of Cambridge in northwest Furnas County, the Medicine Creek Bridge consists of a single 100-foot rigid-connected Pratt pony truss, with a steel stringer approach span, supported by steel pile bent abutments. Comprised of steel components rolled by Bethlehem, the bridge appears to have been built in the mid-1920s from standard plans delineated by the Nebraska Bureau of Roads and Bridges. The Western Bridge and Construction Company of Omaha, which held the county's annual bridge construction contracts from 1908 through the 1920s, is the likely contractor. Apparently unaltered, the Medicine Creek Bridge displays an average degree of physical integrity.

The Medicine Creek Bridge is one of two similar 100-foot riveted Pratt ponies surveyed in Furnas County and is one of dozens of this relatively common structural type found in the state. Although the 100-foot span length is the longest developed by the bureau of roads for this truss configuration (through trusses were used for longer spans), this fact is only marginally noteworthy. As a historically undocumented, single-span example of a common structural type, carrying a secondary road over a minor watercourse, the Medicine Creek Bridge enjoys minimal historical and technological significance.

NAME(S) OF STRUCTURE
Medicine Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003320310; Correspondence from Charles Wright, Furnas County Highway Superintendent, 23 November 1988; Furnas County Commissioners' Record, 1897 - 1930, located at Furnas County Courthouse, Beaver City, Nebraska; field inspection by Clayton Fraser, 29 March 1989.

INVENTORIED BY
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AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Dry Creek Bridge
NDOR: C003321230

FURN05

DATE(S) OF CONSTRUCTION
1917

LOCATION
county road over Dry Creek; S28/33, T4N, R22W
1.6 miles west of Edison; Furnas County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 35)

CONDITION
good

OWNER
Furnas County

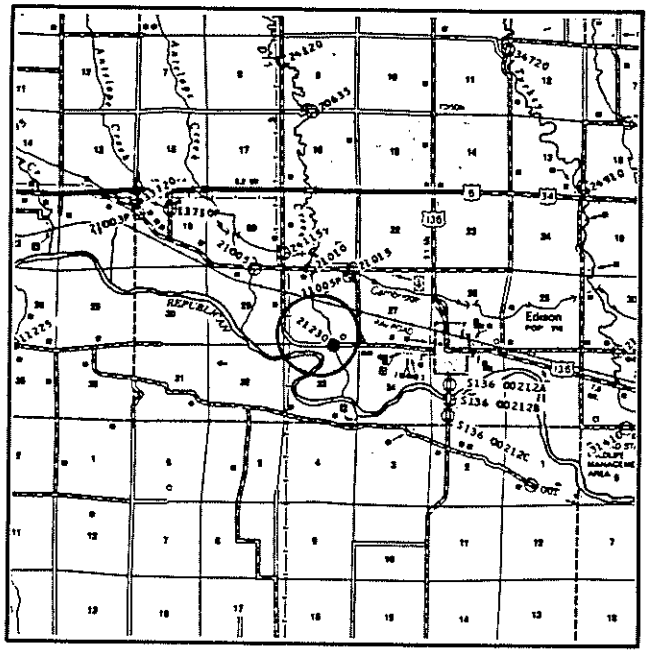
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt pony truss
span length:	50.0'	substructure:	steel pile bent abutments with timber wingwalls
total length:	91.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	16.0'	other features:	upper chord: 2 channels with batten plates; lower chord: 2 looped rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 looped round bars with turnbuckles; lateral bracing: round bar with threaded ends; floor beam: I-beam, field bolted to vertical; guardrail: 2 angles; endpost-mounted builder's plate: **BUILT BY THE WESTERN BRIDGE & CONSTRUCTION Co OMAHA NEB**

The Furnas County Commissioners awarded an annual bridge construction contract to the Western Bridge and Construction Company of Omaha in 1917, as it had done since it began issuing yearly contracts in 1908. One of the small-scale structures ordered that year by the county was this pin-connected pony truss over Dry Creek, located a mile and a half west of Edison. Costing $2,186, the bridge was completed by November of that year. It consisted of a single pinned Pratt pony truss, flanked by a timber stringer approach span. The Dry Creek Bridge has carried secondary traffic since, in relatively unaltered condition.

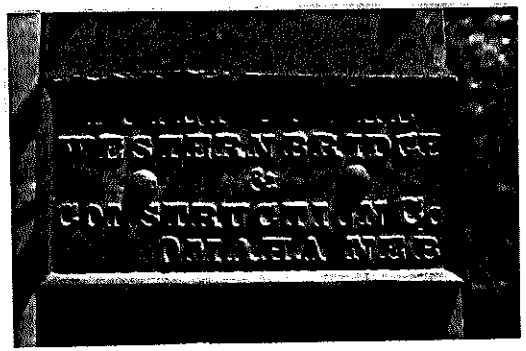
The Dry Creek Bridge typifies short-span construction in Nebraska in the early 1900s. Built by one of the state's most prolific bridge erectors during a period of intense bridge construction activity, it fits well within the mainstream of technological trends for the period. Lacking any major significance in its present location and typifying an exceedingly common structural type in Nebraska, the Dry Creek Bridge lacks any appreciable degree of significance.

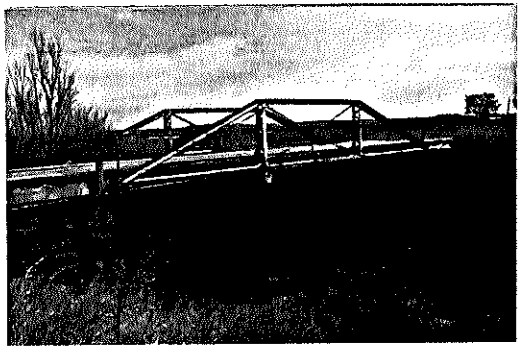
NAME(S) OF STRUCTURE
Dry Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003321230; Proceedings of the Furnas County Commissioners, 6 November 1917 (pages 445-46), located at Furnas County Courthouse, Beaver City, Nebraska; field inspection by Clayton Fraser, 29 March 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Sappa Creek Bridge
NDOR: C003343815

FURN06

DATE(S) OF CONSTRUCTION
ca.1920

LOCATION
county road over Sappa Creek; S4, T1N, R21W
4.9 miles south of Hollinger; Furnas County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 11)

CONDITION
fair

OWNER
Furnas County

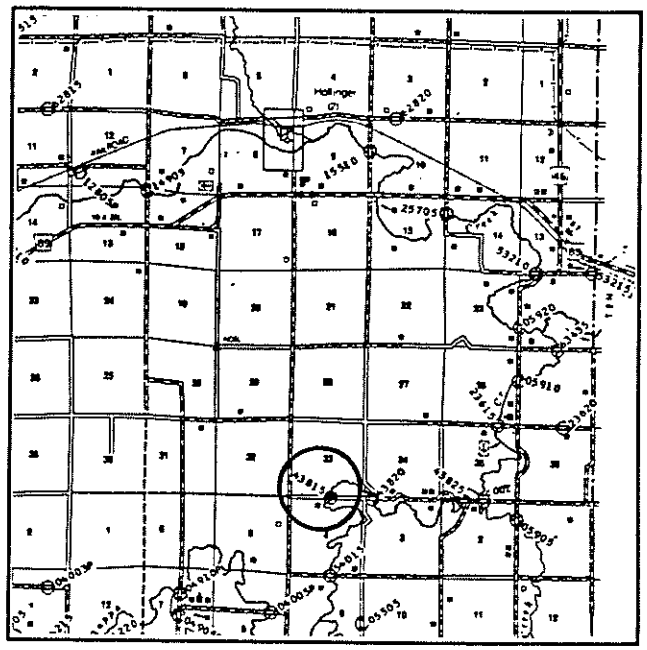
span number:	1	superstructure:	steel, 3-panel, rigid connected Warren pony truss with outriders
span length:	36.0'	substructure:	timber pile bent abutments and wingwalls
total length:	60.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	16.0'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 angles with batten plates; vertical: 4 angles with lacing; diagonal: 2 angles with batten plates; lateral bracing: round bar with threaded ends; floor beam: I-beam, field bolted to vertical; guardrail: none

Carrying a gravel-surfaced county road over Sappa Creek, some five miles south of Hollinger, this small-scale pony truss appears to have been erected ca.1920. Contemporary Furnas County records do not mention this bridge specifically (it may have been more recently moved to its present location), and its construction history is unknown.

The Sappa Creek Bridge is one of some forty Warren pony trusses identified by the statewide inventory. With its history largely undocumented, however, this structure's interpretive value is limited.

NAME(S) OF STRUCTURE
Sappa Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003343815; Proceedings of the Furnas County Commissioners, 6 November 1917 (pages 445-46), located at Furnas County Courthouse, Beaver City, Nebraska; field inspection by Clayton Fraser, 29 March 1989.

INVENTORIED BY
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AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Oxford Bridge
NDOR: S046 00685

FURN07

DATE(S) OF CONSTRUCTION
1947-48

LOCATION
State Highway 46 over the Republican River; S12, T3N, R21W
0.7 mile south of Oxford; Furnas County, Nebraska

USE (ORIGINAL / CURRENT)
highway bridge / highway bridge

RATING NRHP non-eligible (score: 38)

CONDITION
excellent

OWNER
Nebraska Department of Roads

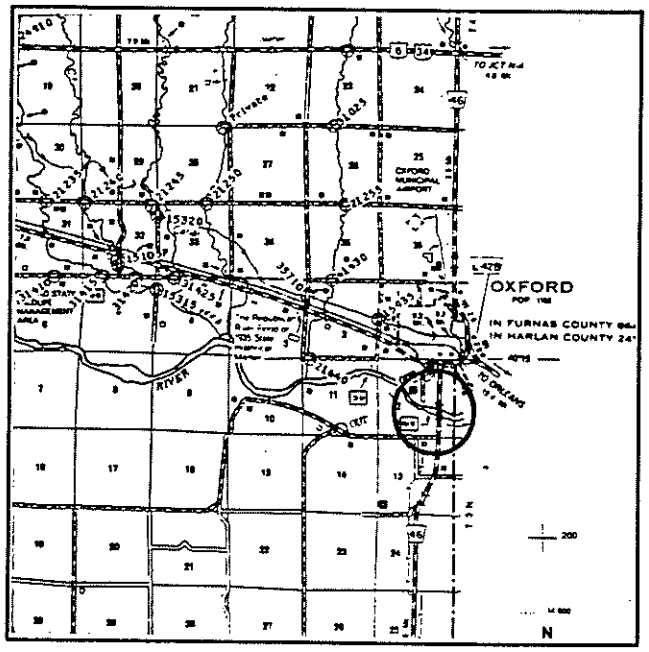
span number:	9	superstructure:	steel cantilevered stringer
span length:	86.0'	substructure:	concrete abutments, wingwalls and piers
total length:	700.0'	floor/decking:	concrete deck over steel stringers
roadway wdt.:	26.0'	other features:	guardrail: solid concrete with incised lines

This large-scale bridge carries State Highway 46 across the Republican River just south of Oxford, less than a mile from the Harlan County line. The concrete-decked structure consists of nine slightly skewed steel stringer spans, supported by concrete piers and abutments. The Oxford Bridge was designed by the Nebraska Bureau of Highways in early 1943 as a major steel structure, requiring 646,530 pounds of superstructural steel, 35,445 pounds of reinforcing steel and 968 cubic yards of concrete. War caused shortages of critical building materials, however, forced the bureau to postpone actual construction for four years. In 1945 the bureau revised the construction drawings slightly, and in 1947 solicited competitive bids for the bridge's construction under Project No. F-194(2). The Bushman Construction Company of Saint Joseph, Missouri, received the contract. Using steel fabricated by the Omaha Steel Works, Bushman completed the structure in 1948. Since its erection, the bridge has served to carry traffic, with minor alteration of the concrete curbs in 1988 as the only alteration of note.

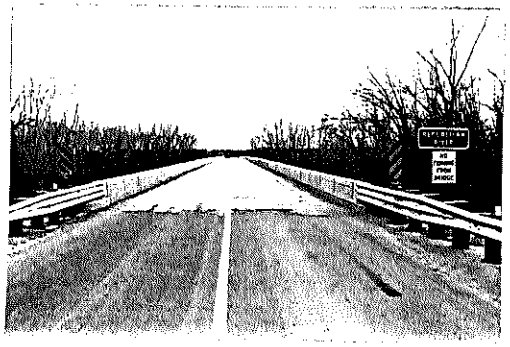
Due to the limitations imposed by the Priorities Critical List, the Nebraska Bureau of Roads and Bridges was forced to curtail its large-scale bridge construction in the early 1940s. The Oxford Bridge was one of several steel bridges, the construction of which was deferred until the war's end in 1945. Its design reflected the development of long-span, cantilevered steel stringer design by the bureau throughout the 1930s. Although the Oxford Bridge typifies this trend, it suffers in comparison with a number of earlier, longer and more historically significant stringer bridges still in use elsewhere in Nebraska.

NAME(S) OF STRUCTURE
Oxford Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number S046 00685; Department of Roads and Irrigation, **Twenty-fifth Biennial Report**, 1942-44, pp. 65, 85, 86; Working drawings for "700' Multiple Span Deck Steel Girder Bridge - Oxford South" produced by the State of Nebraska's Department of Roads and Irrigation, Bureau of Highways, February 1943, revised 1945; field inspection by Clayton Fraser, 29 March 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
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Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Cambridge State Aid Bridge
NDOR: S047 01247

FURN08

DATE(S) OF CONSTRUCTION
1914

LOCATION
State Highway 47 over the Republican River; S32, T4N, R25W
0.6 mile south of Cambridge; Furnas County, Nebraska

USE (ORIGINAL / CURRENT)
highway bridge / highway bridge

RATING NRHP eligible (score: 68)

CONDITION
good

OWNER
Nebraska Department of Roads

span number:	5	superstructure:	reinforced concrete elliptical filled spandrel arch
span length:	64.0'	substructure:	concrete abutments, wingwalls and piers
total length:	312.0'	floor/decking:	concrete deck
roadway wdt.:	28.0'	other features:	guardrail: 2 steel angles with concrete curb

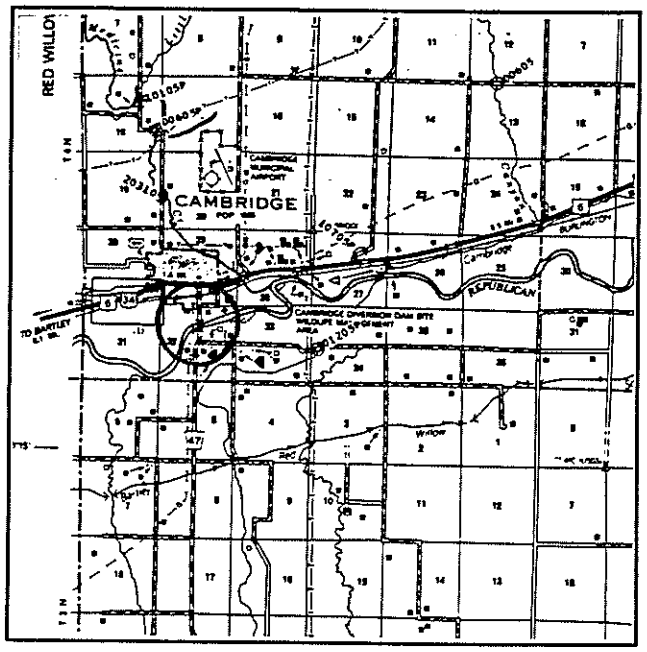
Established by the Nebraska state legislature in 1911, the State Aid Bridge program was designed to assist the counties in construction of major river crossings. In February 1913 the Furnas County commissioners first applied for state aid in building a bridge across the Republican River immediately south of Cambridge. The program was still in its formative stages, and the state engineer's office delineated no less than six alternate designs incorporating variations of concrete arches, concrete girders and steel trusses. On February 26, 1914, proposals were received at the Furnas County Courthouse from nine bridge firms, five of which were Nebraska-based. Low bidder at $18,999, the Lincoln Construction Company was awarded the contract to erect a five-span, concrete spandrel arch structure. Despite difficulties caused by heavy spring floods, the Lincoln-based contractor was able to complete construction by late that fall, and in November 1914 the bridge was opened to traffic. The project's total cost, including some additional concrete, reinforcing steel, approach work, and grading, was $22,406.30, of which the state paid half. The bridge was extended in 1939 by the addition of a 70-foot pony truss and a 19-foot timber stringer. In 1964 both of these spans were removed, and the roadway width of the arches was increased from 20-feet to 28-feet.

Lasting from 1911 until 1936, the state aid bridge program proved immensely successful in providing vehicular bridges over Nebraska's rivers. During this time the state engineer's office built some 77 structures, seventeen of which were concrete arches such as the Cambridge Bridge. Six of these multiple-span arches remain in use today. The Cambridge State Aid Bridge is historically significant on a state level as the oldest existing state aid bridge in Nebraska and as one of the few remaining concrete arches designed by the state engineer. The historical importance of this bridge tends to mitigate the loss of integrity caused by the 1964 widening.

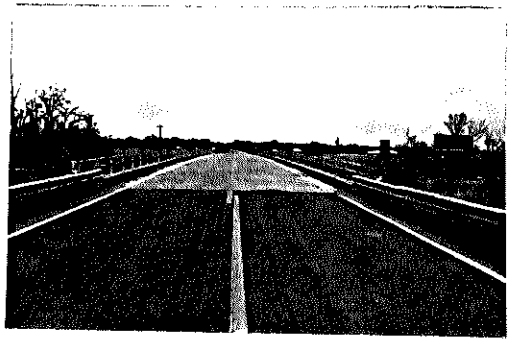
NAME(S) OF STRUCTURE

Cambridge State Aid Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number S047 01247; Proceedings of the Furnas County Commissioners, located at Furnace County Courthouse, Beaver City, Nebraska, refer to the following entries in book 5: 26 February 1914 (page 267), 24 June 1914 (page 282), 10 November 1914 (page 295); Nebraska State Board of Irrigation, Highways and Drainage, **Tenth Annual Biennial Report**, 1912-14, pp. 221, 222, 234, 235, 248; Construction drawings for the Cambridge State Aid Bridge, on file with the Nebraska Department of Roads, Lincoln, NE; Aivars G. Ronis, "Nebraska State Aid Bridges," typewritten report by Nebraksa Department of Roads, September 1971, revised 1978, n.p.; field inspection by Clayton Fraser, 29 March 1989.

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Beaver Creek Bridge
NDOR: S089 04017

FURN09

DATE(S) OF CONSTRUCTION
1941

LOCATION
State Highway 89 over Beaver Creek; S13/24, T2N, R23W
1.3 miles west of Beaver City; Furnas County, Nebraska

USE (ORIGINAL / CURRENT)
highway bridge / highway bridge

RATING NRHP non-eligible (score: 28)

CONDITION
excellent

OWNER
Nebraska Department of Roads

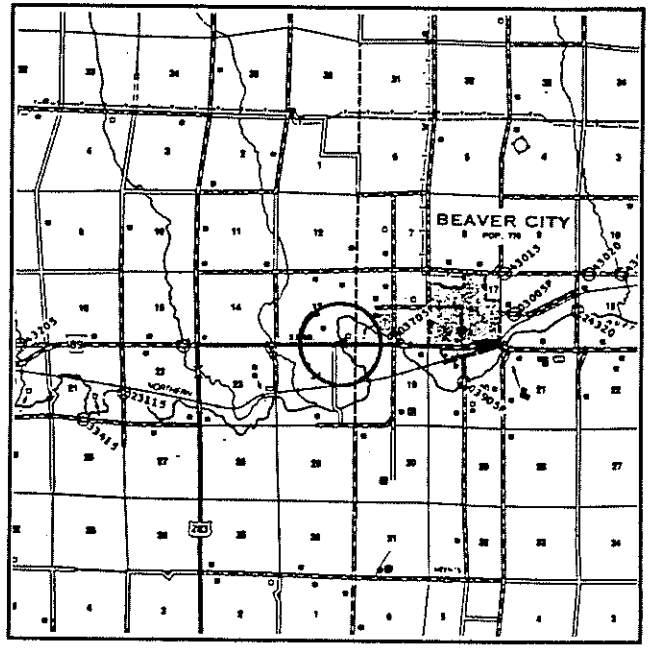
span number:	5	superstructure:	reinforced concrete rigid frame
span length:	38.0'	substructure:	concrete abutments, wingwalls and piers
total length:	150.0'	floor/decking:	concrete deck
roadway wdt.:	24.0'	other features:	guardrail: steel angle

Located just a mile west of Beaver City, this medium-scale bridge carries State Highway 89 across Beaver Creek in south-central Furnas County. The structure is comprised of five reinforced concrete, rigid frame spans with an overall length of 150 feet. Plans for the bridge were drawn by the Nebraska Bureau of Highways in January 1941, and it was let for competitive bids as part of a larger construction project on the highway between Arapahoe and Orleans (Project No. 30-A(5)). On June 12, 1941, the bureau contracted with Orshek and Christensen of Fremont, Nebraska, to build bridges on this section of highway for $44,095.14. The largest structure in this contract, the Beaver Creek Bridge consumed 100,620 pounds of reinforcing steel and 477 cubic yards of concrete. Since its completion later in 1941, the span has served to carry traffic in essentially unaltered condition.

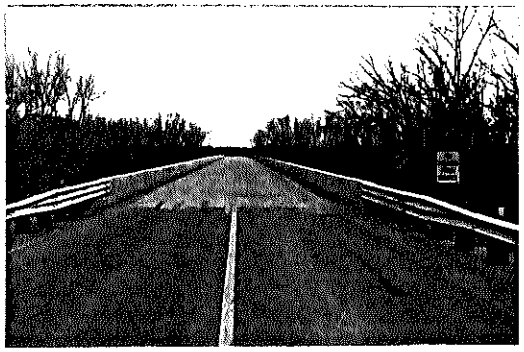
"Prior to the issuance of the Priorities Critical List," the bureau of roads reported in 1942, "concrete slab bridge construction had been improved upon by increasing the thickness over the supports so that continuous type structures with central spans up to 48 feet 6 inches were economically justified. Previous to this improvement in design, this length was limited to 37 feet 6 inches... The concrete-slab bridge has taken over a part of the field of usefulness of the deck-steel-girder construction. The above revision in design increases the occurrence of the concrete-slab and decreases that of the deck-steel-girder bridge." The rigid-frame configuration of the Beaver Creek Bridge differs structurally from the more common, simply supported concrete slabs designed by the bureau of roads in that the superstructure is constructed integrally with the supports. Other than this distinction, this bridge is typical of the hundreds of concrete structures built by the bureau of roads in the 1930s and 1940s.

NAME(S) OF STRUCTURE
Beaver Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number S089 04017; Department of Roads and Bridges, Twenty-fourth Biennial Report, 1941-42, pp. 67, 86, 113; Construction drawings for "148' Multiple Span Concrete Slab Bridge - Beaver City-Arapahoe, Furnas County" produced by the State of Nebraska's Department of Roads and Irrigation, Bureau of Highways, January 1941; field inspection by Clayton Fraser, 29 March 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Turkey Creek Bridge
NDOR: C003400305P

GAGE01

DATE(S) OF CONSTRUCTION
ca.1905

LOCATION
township road over Turkey Creek; SW1/4 S29, T5N, R5E
2.0 miles southeast of DeWitt; Gage County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING determined NRHP non-eligible (score: 25)

CONDITION
good

OWNER
Gage County

span number:	1	superstructure:	steel, 5-panel, pin-connected Pratt pony truss with timber stringer approach spans
span length:	80.0'	substructure:	I-beam bents, main span and southeast approach; timber pile bents and abutments
total length:	369.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	15.8'	other features:	upper chord: 2 channels with cover plate and batten plates; lower chord: punched eyebars; vertical: 2 pair angles with lacing; diagonal: looped eyebars; counters: looped eyebars; floor beam: I-beams; lateral bracing: rods; guardrail: lattice

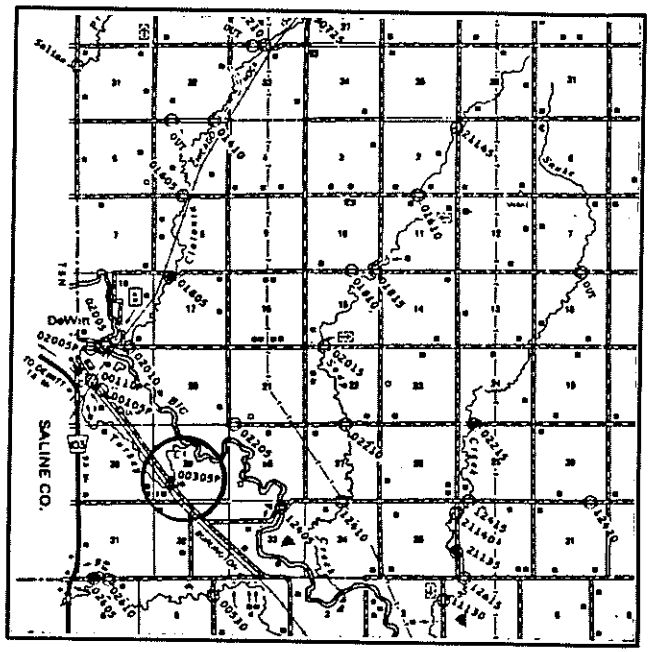
County records do not refer specifically to the construction of this bridge, which carries an unpaved road over Turkey Creek. Records indicate, however, that the structure was apparently damaged by a flood in 1908. Three bridge companies received Gage County's annual bridge erection contract in the first decade of the 20th century: J.H. Sparks of St. Joseph, Missouri, from 1899 to 1905, John Gilligan of Falls City in 1906, and Standard Bridge Company from 1907 on. All of these companies were active in Nebraska during this period, and any of them may have been responsible for the bridge's construction.

Pratt ponies were the most common truss type built in Nebraska in the first decades of the 20th century, and many of this type survive. In Gage County, however, Warren trusses were more popular until state standard plans were adopted in 1914. The Turkey Creek Bridge represents an exception to this trend.

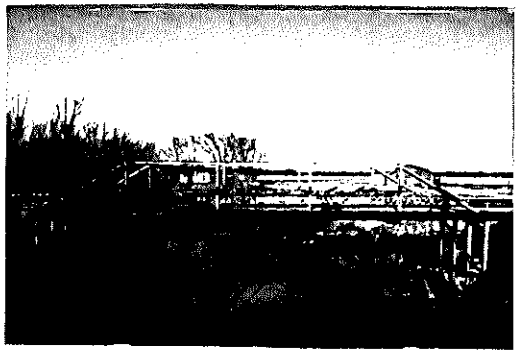
NAME(S) OF STRUCTURE

Turkey Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003400305P; Gage County Board of Supervisors' Records, 1874-1917, see specifically 20 June 1908, located at Gage County Courthouse, Beatrice, Nebraska; field inspection by Fred Quivik, 6 March 1989.

INVENTORIED BY

Lon Johnson, Renewable Technologies, Inc.

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Big Indian Creek Bridge
NDOR: C003400310

GAGE02

DATE(S) OF CONSTRUCTION
1904

LOCATION
township road over Big Indian Creek; S29/30, T2N, R5E
6.2 miles northwest of Odell; Gage County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 29)

CONDITION
good

OWNER
Gage County

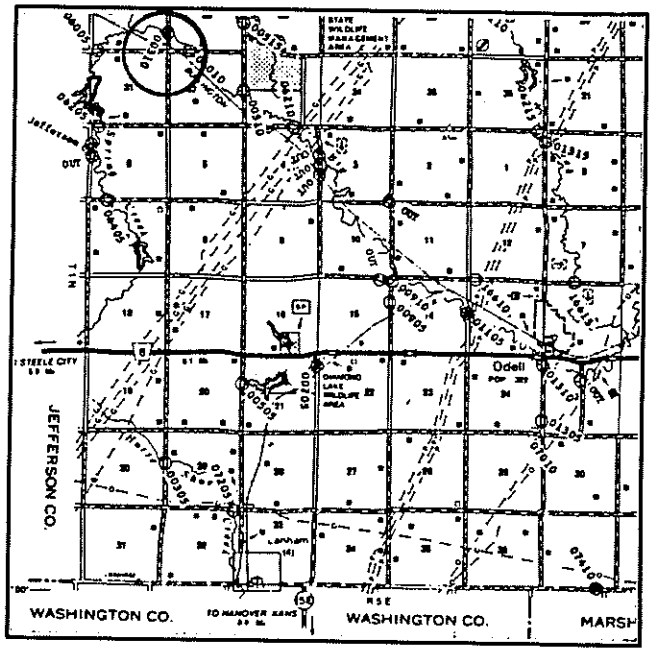
span number:	1	superstructure:	steel, 3-panel, rigid-connected Warren pony truss with steel stinger approach spans
span length:	40.0'	substructure:	timber pile abutments; timber pile bent (north); I-beam bent (south)
total length:	79.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.8'	other features:	upper chord: 2 angles with cover plate; lower chord: 2 angles with batten plates; vertical: angles; diagonal: 2 angles with batten plates; strut: angle outriggers; floor beam: I-beams; lateral bracing: rods; guardrail: none

This bridge was one of 27 bridges the Gage County Commissioners ordered constructed on July 14, 1904. J.H. Sparks of St. Joseph, Missouri, had the annual contract to construct the county's bridges from 1899 through 1904. In 1905, the county awarded its annual contract to the John Gilligan Company of Falls City, Nebraska, and entered into litigation against Sparks, claiming that he had not followed the county's bridge specifications. Sparks, in turn, maintained that the county had not paid him for work he had completed satisfactorily. The court ultimately ruled in his favor.

The Big Indian Creek Bridge is a well-preserved example of the many small structures built by counties during the first two decades of this century in response to the public's demand for adequate transportation networks. Unlike many similar structures, however, it features the Warren truss rather than the more common Pratt. Also, the builder and the construction date for this bridge are documented, and the structure gains significance for its associations with J.H. Sparks of St. Joseph, Missouri, a bridge builder active in Nebraska in the early 20th century.

NAME(S) OF STRUCTURE
Big Indian Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003400310; Gage County Supervisors' Record, 1874-1917, see specifically 1 March 1904, 14 July 1904, located at the Gage County Courthouse, Beatrice, Nebraska; field inspection by Fred Quivik, 2 March 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C003400425

GAGE03

DATE(S) OF CONSTRUCTION
ca.1908

LOCATION
township road over unnamed stream; S2/11, T6N, R8E
3.5 miles northeast of Adams; Gage County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING determined NRHP non-eligible (score: 30)

CONDITION
good

OWNER
Gage County

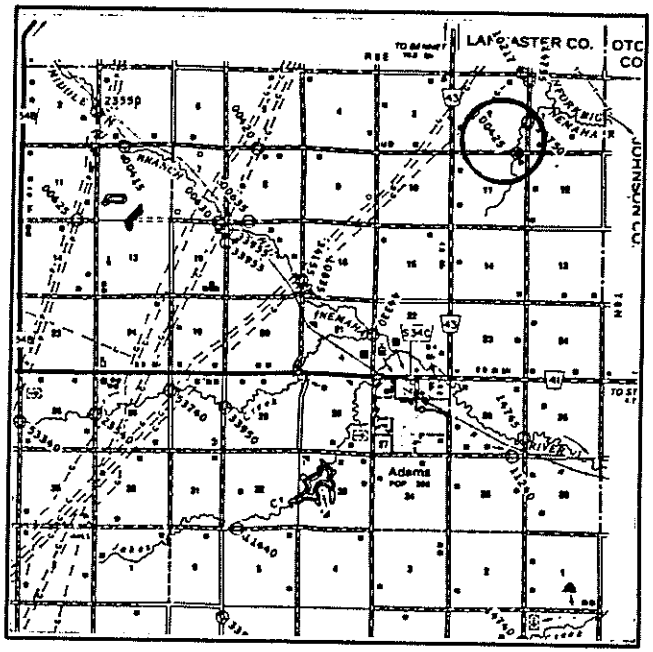
span number:	1	superstructure:	steel, 2-panel, rigid-connected Warren pony truss
span length:	30.0'	substructure:	I-beam/timber pile bent pier and abutments with timber backwalls
total length:	44.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.8'	other features:	upper chord: 2 angles with cover plate; lower chord: 2 angles with batten plates; vertical: angles; diagonal: 2 angles with batten plates; strut: angle outriggers; floor beam: I-beams; lateral bracing: rods; guardrail: lattice

This bridge appears to have been built in 1908 by the Standard Bridge Company of Omaha, following flood damage to the previous bridge located at this location. Standard received the county's annual bridge erection contract for a number of years beginning in 1908.

Between 1897 and 1910, Gage County contracted for perhaps as many as two hundred of these standardized riveted Warren pony trusses. At the time of this survey, 32 still survive, of which four (**GAGE19, GAGE27, GAGE28** and **GAGE29**) best exemplify this style.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
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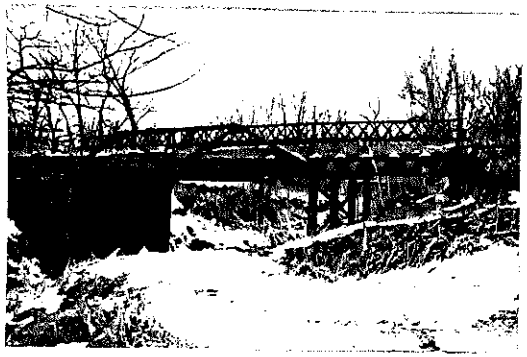
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003400425; Gage County Supervisors' Record, 1875-1917, see specifically 20 June 1908, located at the Gage County Courthouse, Beatrice, Nebraska; field inspection by Fred Quivik, 4 March 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Clatonia Creek Bridge
NDOR: C003400610

GAGE04

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
township road over Clatonia Creek; S12/13, T6N, R5E
3.0 miles northeast of Clatonia; Gage County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 27)

CONDITION
fair

OWNER
Gage County

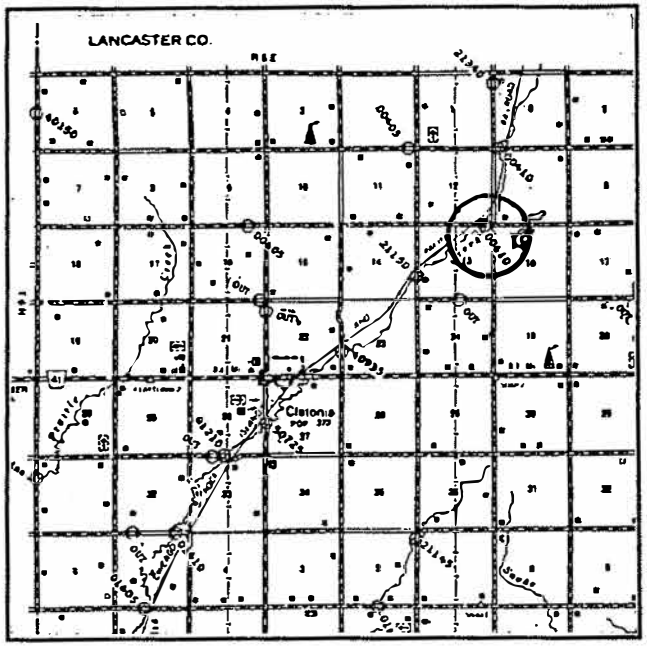
span number:	1	superstructure:	steel, 3 panel, pinned Pratt half-hip pony truss
span length:	44.0'	substructure:	built-up steel H-piles (with welded height shim) with timber back- and sidewalls
total length:	45.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	15.7'	other features:	upper chord: 2 channels with cover plate and batten plates; lower chord; looped eyebars, punched eyebar (center); vertical: 2 pair angles with lacing; diagonal: looped eyebars; counters: looped eyebars; floor beam: I-beams; guardrail: none

A 32-foot bridge with a 16-foot approach span was constructed at this location in 1900. County records do not refer specifically to this bridge. Given the existing bridge's design and construction, a circa 1910 construction date seems appropriate. Half-hip trusses were not built after the county adopted state standard plans in 1914. Standard Bridge Company received the county's annual bridge erection contract beginning in 1908 and for many years thereafter, and was therefore probably responsible for building this bridge. While Gage County issued detailed specifications for bridge construction, the actual plans were apparently provided by the bridge company.

The Clatonia Creek Bridge is typical of many small pony trusses built in Nebraska before use of state plans - which did not include half-hip designs - was mandated in 1913. The half-hip style was popular because, lacking verticals at the hips, it used less material and was therefore less expensive than a full truss.

NAME(S) OF STRUCTURE
Clatonia Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003400610; Gage County Board of Supervisors' Records, 1874-1917, located at Gage County Courthouse, Beatrice, Nebraska; field inspection by Fred Quivik, 2 March 1989.

INVENTORIED BY	AFFILIATION	DATE
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C003400705

GAGE05

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county highway over unnamed stream; S21/22, T1N, R5E
3.0 miles east of Odell; Gage County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 29)

CONDITION
good

OWNER
Gage County

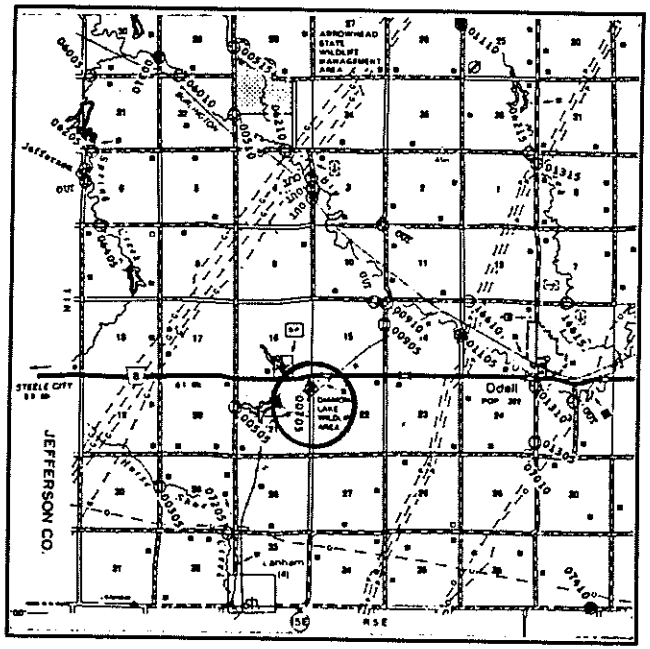
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt half-hip pony truss
span length:	41.0'	substructure:	concrete abutment (south); timber pile abutment (north)
total length:	42.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	15.3'	other features:	upper chord: 2 channels with cover plate and batten plates; lower chord: looped eyebars; vertical: 2 pair angles with lacing; diagonal: looped eyebars; counter: rods; floor beam: I-beam; lateral bracing: rods; guardrail: lattice

County records do not refer specifically to this bridge. Given the existing bridge's design and construction, a circa 1910 construction date seems appropriate. Half-hip trusses were not built after the county adopted state standard plans in 1914. Standard Bridge Company received the county's annual bridge erection contract beginning in 1908 and for many years thereafter, and was therefore probably responsible for building this bridge. While Gage County issued detailed specifications for bridge construction, the actual plans were apparently provided by the bridge company.

This bridge is typical of many small pony trusses built in Nebraska before use of state plans -- which did not include half-hip designs -- was mandated in 1913. The half-hip style was popular because, lacking verticals at the hips, it used less material and was therefore less expensive than a full truss.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003400705; Gage County Board of Supervisors' Records, 1874-1917, located at Gage County Courthouse, Beatrice, Nebraska; field inspection by Fred Quivik, 2 March 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Big Indian Creek Bridge
NDOR: C003401105

GAGE06

DATE(S) OF CONSTRUCTION
ca.1908

LOCATION
township road over Big Indian Creek; S13/14, T1N, R5E
1.0 mile west of Odell; Gage County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge (closed to traffic)

RATING NRHP non-eligible (score: 33)

CONDITION
good

OWNER
Gage County

span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt half-hip pony truss with timber stringer approaches
span length:	60.0'	substructure:	steel built-up H-pile bents; timber pile abutments with timber back- and wingwalls
total length:	101.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	15.8'	other features:	end post: 2 channels with lacing; upper chord: 2 channels with cover plate and batten plates; lower chord: looped eyebars, punched eyebars (center); vertical: 2 pair angles with lacing; diagonal: punched eyebars; counter: rods; floor beam: variable depth plate girder; lateral bracing: rods; guardrail: none

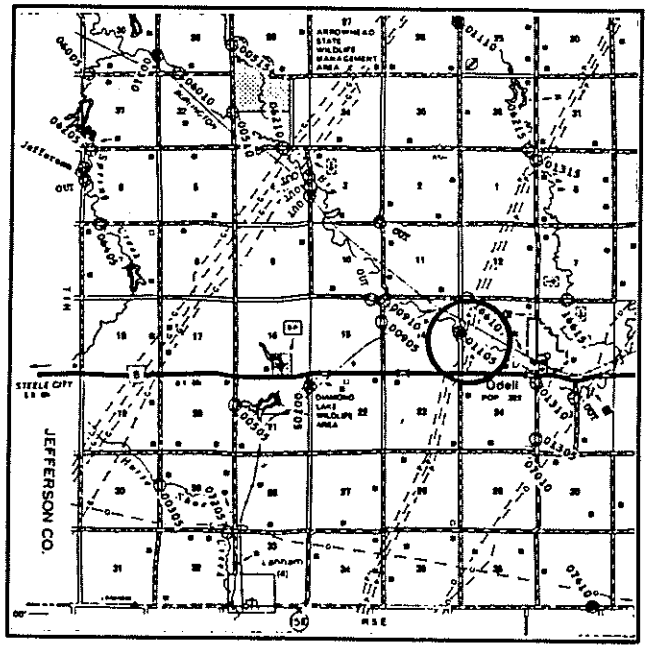
In June 1895, the bridge committee of the Gage County Board of Supervisors advised that "all new bridges hereafter constructed in our county requiring spans of 30 feet and upward, be built of iron, and put up in the most substantial manner." At the same time, the committee recommended construction of a number of bridges, including "one span 42 ft., over Indian Creek, Glenwood township between sections 13 & 14 with 48 ft. of approach." While this location is apparently the site of this 60-foot truss, the span length does not match. Given the bridge's H-pile substructure, developed by the Standard Bridge Company in 1902, a date of ca.1908 seems appropriate. Standard Bridge received the county's annual bridge erection contract beginning in 1908 and for many years thereafter, and was therefore probably responsible for building this bridge.

This structure's light-weight construction and unusual detailing, such as plate girder floor beams of variable depth, mark it as unique. Lack of documentation about the bridge, however, diminishes its significance, however.

NAME(S) OF STRUCTURE

Big Indian Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003401105; Gage County Board of Supervisors' Records, 1874-1917, see specifically 14 June and 12 July 1895, located at Gage County Courthouse, Beatrice, Nebraska; field inspection by Fred Quivik, 2 March 1989.

INVENTORIED BY

Lon Johnson, Renewable Technologies, Inc.

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Ash Creek Bridge
NDOR: C003401110

GAGE07

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
township road over Ash Creek; S25/26, T2N, R5E
7.0 miles west of Wymore; Gage County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 29)

CONDITION
good

OWNER
Gage County

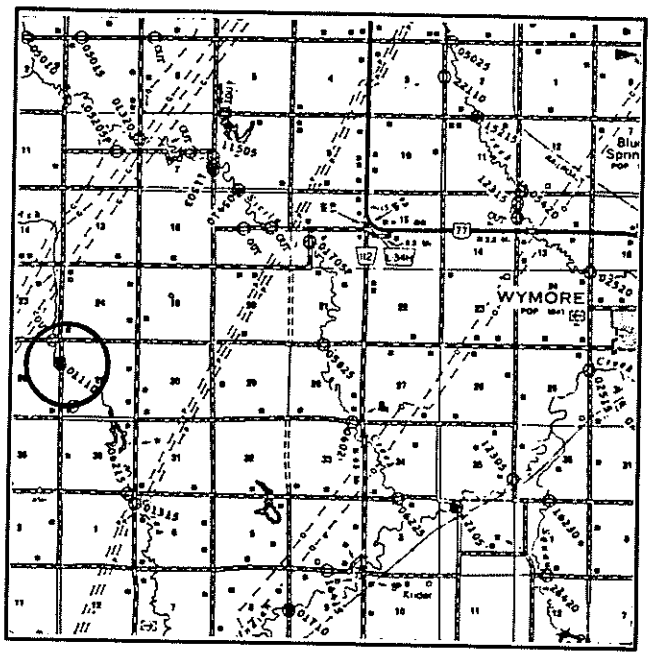
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt half-hip pony truss
span length:	44.0'	substructure:	timber piles with timber back- and wingwalls
total length:	45.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	19.7'	other features:	upper chord: 2 channels with cover plate and batten plates; lower chord: looped eyebars; vertical: 2 pair angles with lacing; diagonal: looped eyebars; counters: looped eyebars; floor beam: I-beams; lateral bracing: rods; guardrail: lattice

County records do not refer specifically to this bridge. Given the existing bridge's design and construction, a circa 1910 construction date seems appropriate. Half-hip trusses were not built after the county adopted state standard plans in 1914. Standard Bridge Company received the county's annual bridge erection contract beginning in 1908 and for many years thereafter, and was therefore probably responsible for building this bridge. While Gage County issued detailed specifications for bridge construction, the actual plans were apparently provided by the bridge company.

The Ash Creek Bridge is typical of many small pony trusses built in Nebraska before use of state plans - which did not include half-hip designs - was mandated in 1913. The half-hip style was popular because, lacking verticals at the hips, it used less material and was therefore less expensive than a full truss.

NAME(S) OF STRUCTURE
Ash Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003401110; Gage County Board of Supervisors' Records, 1874-1917, located at Gage County Courthouse, Beatrice, Nebraska; field inspection by Fred Quivik, 2 March 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Big Indian Creek Bridge
NDOR: C003401710

GAGE08

DATE(S) OF CONSTRUCTION
ca.1908

LOCATION
township road over Big Indian Creek; S8/9, T1N, R6E
2.0 miles northeast of Odell; Gage County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / closed

RATING determined NRHP non-eligible (score: 25)

CONDITION
fair

OWNER
Gage County

span number:	1	superstructure:	steel, 3-panel, rigid-connected Warren pony truss with timber stringer approach spans
span length:	40.0'	substructure:	I-beam bents; timber pile abutments with timber/steel sheet piling back- and wingwalls
total length:	72.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.7'	other features:	upper chord: 2 angles with cover plate (channel welded to upper chord); lower chord: 2 angles with battens; vertical: angles; diagonal: 2 angles with battens (two additional angles welded to existing); floor beam: I-beams; lateral bracing: rods; guardrail: none

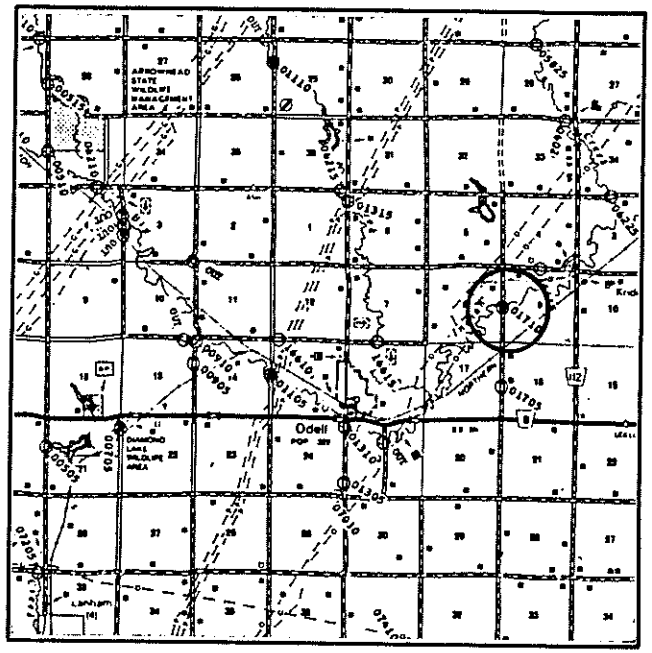
County records indicate that this bridge, which carries an unpaved road over Big Indian Creek, may have been built in 1908 after a flood washed away a previous structure. This date appears consistent with the structure's design and construction. Standard Bridge Company of Omaha received the county's annual bridge contract in 1908 and for a number of years thereafter.

Between 1897 and 1910, Gage County contracted for perhaps as many as two hundred of these standardized riveted Warren pony trusses. At the time of this survey, 32 still survive, of which four (**GAGE19, GAGE27, GAGE28** and **GAGE29**) best exemplify this style.

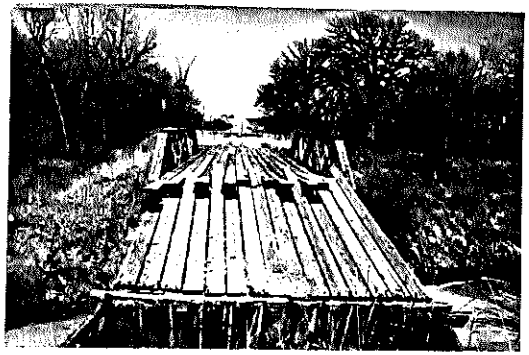
NAME(S) OF STRUCTURE

Big Indian Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003401710; Gage County Board of Supervisors' Records, 1874-1917, see specifically 20 June 1908, located at Gage County Courthouse, Beatrice, Nebraska; field inspection by Fred Quivik, 7 March 1989.

INVENTORIED BY	AFFILIATION	DATE
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Clatonia Creek Bridge
NDOR: C003401805

GAGE09

DATE(S) OF CONSTRUCTION
1900

LOCATION
township road over Clatonia Creek; S8/17, T5N, R5E
1.5 miles northeast of DeWitt; Gage County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 29)

CONDITION
good

OWNER
Gage County

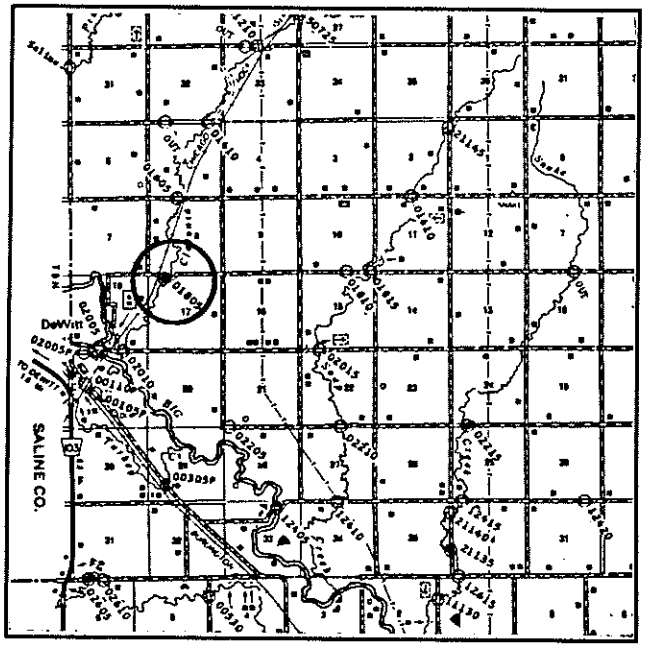
span number:	1	superstructure:	steel, 3-panel, rigid-connected Warren pony truss with timber stringer approach spans
span length:	40.0'	substructure:	I-beam pile bents; timber pile abutments with timber backwalls
total length:	71.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	14.0'	other features:	upper chord: 2 angles with cover plate; lower chord: 2 angles with batten plates; vertical: angles; diagonal: 2 angles with batten plates; strut: angle outriggers; floor beam: I-beams; lateral bracing: rods

This bridge was one of 33 bridges the Gage County Commissioners ordered constructed on August 30, 1900. J.H. Sparks of St. Joseph, Missouri had the annual contract to construct the county's bridges from 1899 through 1904.

The Clatonia Creek Bridge is typical of the many small structures built by the counties during the first two decades of this century in response to the public's demand for adequate transportation networks. Unlike many similar structures, the builder and the construction date for this bridge are documented. This bridge may also have significance for its associations with the bridge builder, J.H. Sparks of St. Joseph, Missouri.

NAME(S) OF STRUCTURE
Clatonia Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003401805; Gage County Supervisors' Record, 30 August 1900, located at the Gage County Courthouse, Beatrice, Nebraska; field inspection by Fred Quivik, 6 March 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Hooker Creek Bridge
NDOR: C003401850

GAGE10

DATE(S) OF CONSTRUCTION
1911 (?)

LOCATION
township road over Hooker Creek; S11/14, T5N, R8E
3.0 miles south of Adams; Gage County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 33)

CONDITION
good

OWNER
Gage County

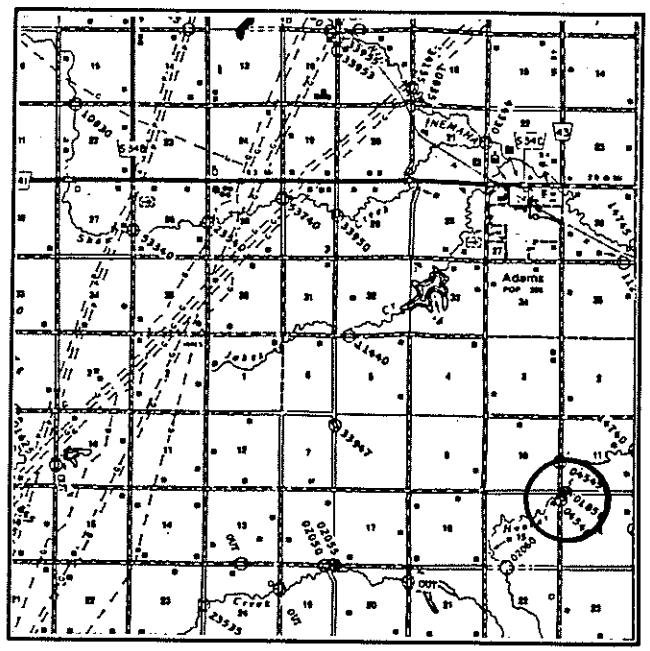
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt half-hip pony truss
span length:	40.0'	substructure:	I-beam piles with timber back- and wingwalls
total length:	42.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	15.6'	other features:	upper chord: 2 channels with cover plate and batten plates; lower chord: looped eyebars; vertical: 2 pair angles with lacing; diagonal: looped eyebars; counters: looped eyebars; floor beam: I-beam: lateral bracing: rods; guardrail: lattice

In 1911, the Gage County Commissioners ordered emergency repairs to a 32-foot steel span at this location. Although there are no further references to the site, the county may had opted to replace the structure instead with the truss structure now there. Half-hip trusses were not built after the county adopted state standard plans in 1914. Standard Bridge Company received the county's annual bridge erection contract beginning in 1908 and for many years thereafter, and was therefore probably responsible for building this bridge. While Gage County issued detailed specifications for bridge construction, the actual plans were apparently provided by the bridge company.

The Hooker Creek Bridge is typical of many small pony trusses built in Nebraska before use of state plans - which did not include half-hip designs - was mandated in 1913. The half-hip style was popular because, lacking verticals at the hips, it used less material and was therefore less expensive than a full truss.

NAME(S) OF STRUCTURE
Hooker Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003401850; Gage County Supervisors' Record, 23 August 1911, located at the Gage County Courthouse, Beatrice, Nebraska; field inspection by Fred Quivik, 4 March 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bear Creek Bridge
NDOR: C003402055

GAGE11

DATE(S) OF CONSTRUCTION
ca.1905

LOCATION
township road over Bear Creek; S17/20, T5N, R8E
5.0 miles southwest of Adams; Gage County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 30)

CONDITION
good

OWNER
Gage County

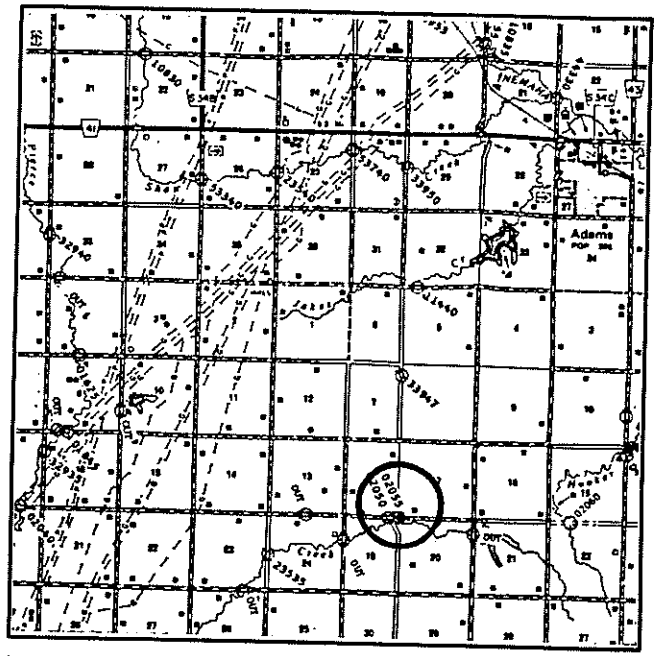
span number:	1	superstructure:	steel, 2-panel, rigid-connected Warren pony truss
span length:	30.0'	substructure:	I-beam piles with timber back- and wingwalls
total length:	32.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	19.6'	other features:	upper chord: 2 angles with cover plate; lower chord: 2 angles with batten plates; vertical: angles; diagonal: 2 angles with batten plates; strut: angle outriggers; floor beam: I-beams; lateral bracing: rods; guardrail: 2 channels

The Gage County Supervisors ordered a 28-foot pile bridge built at this location in 1902, so this bridge apparently dates from sometime during the following decade. Pratt pony trusses were preferred after the county adopted state standard plans in 1914. J.H. Sparks of St. Joseph, Missouri, John Gilligan of Falls City, Nebraska, and the Standard Bridge Company of Omaha all built bridges in Gage County during the first decade of the 20th century.

Between 1897 and 1910, Gage County contracted for perhaps as many as two hundred of these standardized riveted Warren pony trusses. At the time of this survey, 32 still survive, of which four (**GAGE19, GAGE27, GAGE28** and **GAGE29**) best exemplify this style.

NAME(S) OF STRUCTURE
Bear Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003402055; Gage County Supervisors' Record, 1874-1917, see specifically 1 August 1902, located at the Gage County Courthouse, Beatrice, Nebraska; field inspection by Fred Quivik, 4 March 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Snake Creek Bridge
NDOR: C003402215

GAGE12

DATE(S) OF CONSTRUCTION
ca.1900

LOCATION
township road over Snake Creek; S24/25, T5N, R5E
4.0 miles north of Hoag; Gage County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 20)

CONDITION
good

OWNER
Gage County

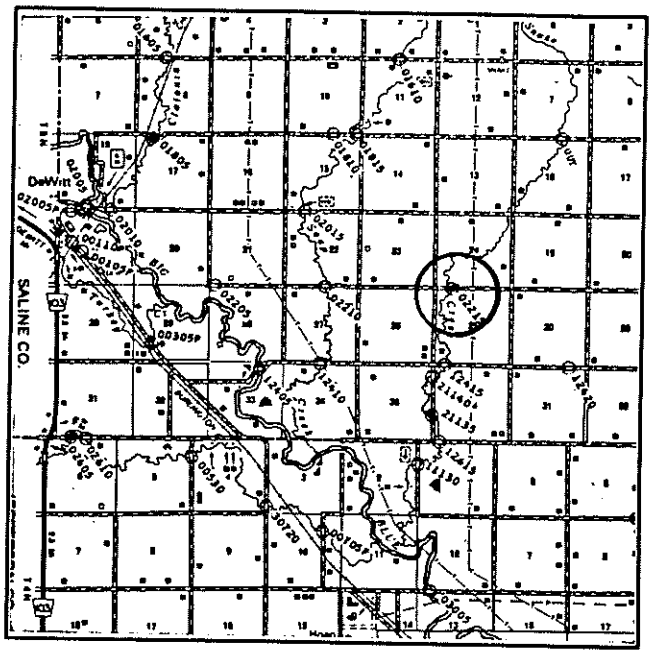
span number:	1	superstructure:	steel, 2-panel, rigid-connected Warren pony truss
span length:	30.0'	substructure:	I-beam piles with timber back- and wingwalls
total length:	32.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	15.8'	other features:	upper chord: 2 angles with cover plate; lower chord: 2 angles with batten plates; vertical: angles; diagonal: 2 angles with batten plates; strut: angle outriggers; floor beam: I-beams; lateral bracing: rods; guardrail: none

County records do not contain any specific information about this small-scale Warren pony truss bridge, which carries an unpaved road over Snake Creek. Pratt pony trusses were preferred after the county adopted state standard plans in 1914, so this bridge dates prior to that time. The Youngstown Bridge Company, J.H. Sparks of St. Joseph, Missouri, John Gilligan of Falls City, Nebraska, and the Standard Bridge Company of Omaha all built bridges in Gage County during the last years of the 1800s and the first decade of the 20th century.

Between 1897 and 1910, Gage County contracted for perhaps as many as two hundred of these standardized riveted Warren pony trusses. At the time of this survey, 32 still survive, of which four (**GAGE19**, **GAGE27**, **GAGE28** and **GAGE29**) best exemplify this style.

NAME(S) OF STRUCTURE
Snake Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003402215; Gage County Board of Supervisors' Records, 1874-1917, located at Gage County Courthouse, Beatrice, Nebraska; field inspection by Fred Quivik, 6 March 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C003402605

GAGE13

DATE(S) OF CONSTRUCTION
1909

LOCATION
township road over unnamed stream; S6/31, T4/5N, R5E
4.0 miles northwest of Hoag; Gage County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 35)

CONDITION
good

OWNER
Gage County

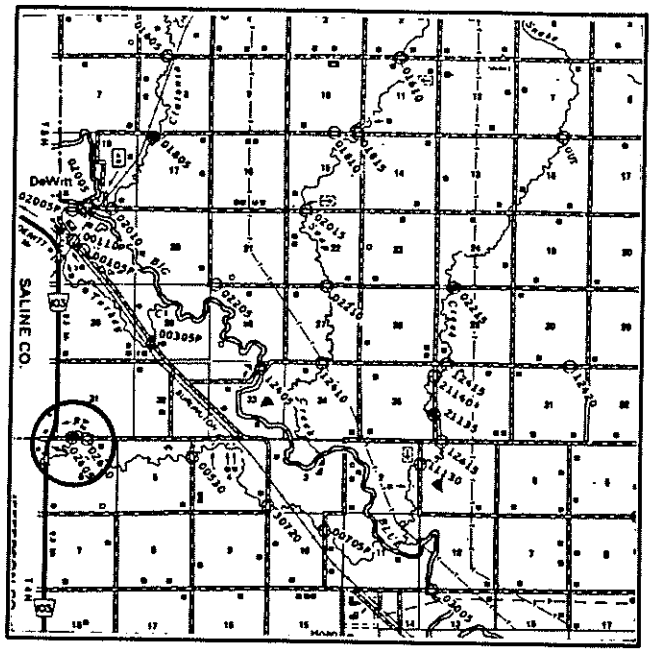
span number:	1	superstructure:	steel, 2-panel, rigid-connected Warren pony truss
span length:	30.0'	substructure:	I-beam piles with timber backwalls
total length:	32.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	15.7'	other features:	upper chord: 2 angles with cover plate; lower chord: 2 angles with batten plates; vertical: angles; diagonal: 2 angles with batten plates; strut: angle outriggers; floor beam: I-beams; lateral bracing: rods; guardrail: none

This bridge was one of 30 bridges the Gage County Commissioners ordered constructed on September 4, 1909. The Standard Bridge Company of Omaha, Nebraska had the annual contract to construct the county's bridges that year.

Between 1897 and 1910, Gage County contracted for perhaps as many as two hundred of these standardized riveted Warren pony trusses. At the time of this survey, 32 still survive, of which four (**GAGE19, GAGE27, GAGE28** and **GAGE29**) best exemplify this style.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003402605; Gage County Supervisors' Record, 1874-1917, see specifically 3 and 4 September 1909, located at the Gage County Courthouse, Beatrice, Nebraska; field inspection by Fred Quivik, 6 March 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C003403115

GAGE14

DATE(S) OF CONSTRUCTION
ca.1900

LOCATION
township road over unnamed stream; S27/28, T1N, R7E
3.0 miles southwest of Barneston; Gage County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 20)

CONDITION
good

OWNER
Gage County

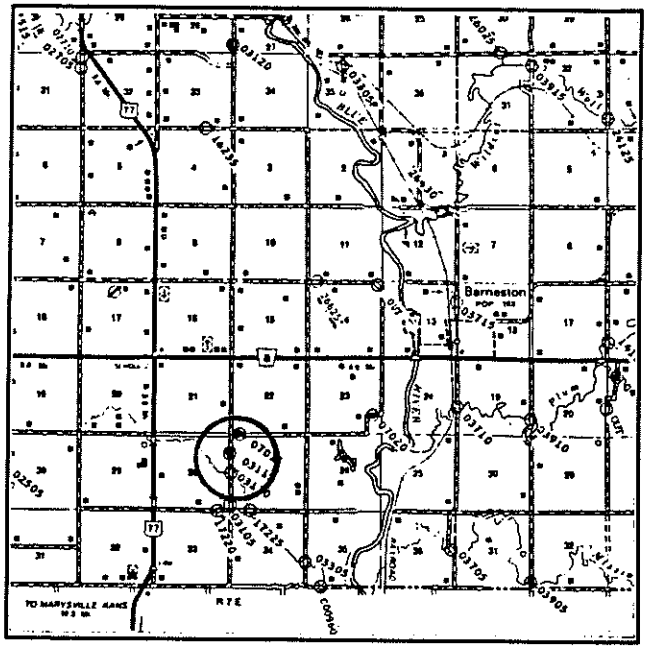
span number:	1	superstructure:	steel, 2-panel, rigid-connected Warren pony truss
span length:	23.0'	substructure:	timber piles
total length:	24.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	15.6'	other features:	upper chord: 2 angles with cover plate; lower chord: 2 angles with batten plates; vertical: angles; diagonal: 2 angles with batten plates; strut: angle outriggers; floor beam: I-beams; lateral bracing: rods; guardrail: none

County records do not contain any specific information about this small-scale Warren pony truss bridge, which carries an unpaved road over a small stream. Pratt pony trusses were preferred after the county adopted state standard plans in 1914, so this bridge dates prior to that time. The Youngstown Bridge Company, J.H. Sparks of St. Joseph, Missouri, John Gilligan of Falls City, Nebraska, and the Standard Bridge Company of Omaha all built bridges in Gage County during the last years of the 1800s and the first decade of the 20th century.

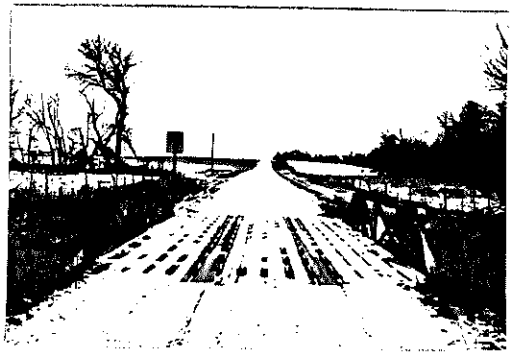
Between 1897 and 1910, Gage County contracted for perhaps as many as two hundred of these standardized riveted Warren pony trusses. At the time of this survey, 32 still survive, of which four (**GAGE19, GAGE27, GAGE28** and **GAGE29**) best exemplify this style.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003403115; Gage County Board of Supervisors' Records, 1874-1917, located at Gage County Courthouse, Beatrice, Nebraska; field inspection by Fred Quivik, 2 March 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C003403120

GAGE15

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
township road over unnamed stream; S27/28, T2N, R7E
1.5 miles southeast of Wymore; Gage County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 32)

CONDITION
good

OWNER
Gage County

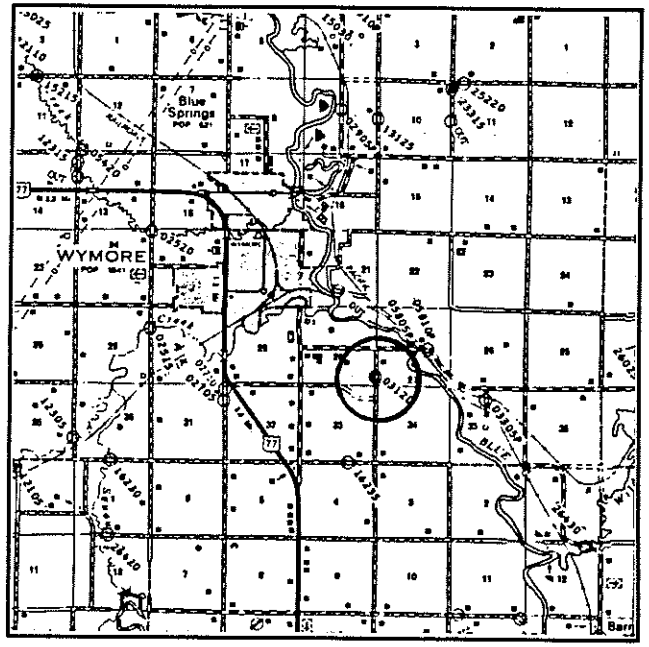
span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt half-hip pony truss
span length:	60.0'	substructure:	I-beam piles
total length:	60.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	15.4'	other features:	upper chord: 2 channels with cover plate and batten plates; lower chord: looped eyebars (outer), punched eyebars (center); vertical: 2 pair angles with lacing; diagonal: looped eyebars; counter: rods; floor beam: I-beam; lateral bracing: rods; guardrail: lattice

County records do not refer specifically to this bridge. The records do indicate that a 32-foot iron span was erected at this location in 1900. Given the existing bridge's design and construction, a circa 1910 construction date seems appropriate. Half-hip trusses were not built after the county adopted state standard plans in 1914. Standard Bridge Company received the county's annual bridge erection contract beginning in 1908 and for many years thereafter, and was therefore probably responsible for building this bridge. While Gage County issued detailed specifications for bridge construction, the actual plans were apparently provided by the bridge company.

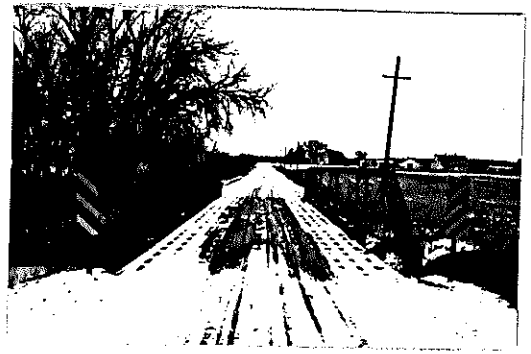
This bridge is typical of many small pony trusses built in Nebraska before use of state plans - which did not include half-hip designs - was mandated in 1913. The half-hip style was popular because, lacking verticals at the hips, it used less material and was therefore less expensive than a full truss.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003403120; Gage County Board of Supervisors' Records, 1874-1917, see specifically 31 August 1900, located at Gage County Courthouse, Beatrice, Nebraska; field inspection by Fred Quivik, 2 March 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Mission Creek Bridge
NDOR: C003403905

GAGE16

DATE(S) OF CONSTRUCTION
ca.1900

LOCATION
township road over Mission Creek; S31/32, T1N, R8E
3.0 miles south of Barneston; Gage County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 20)

CONDITION
good

OWNER
Gage County

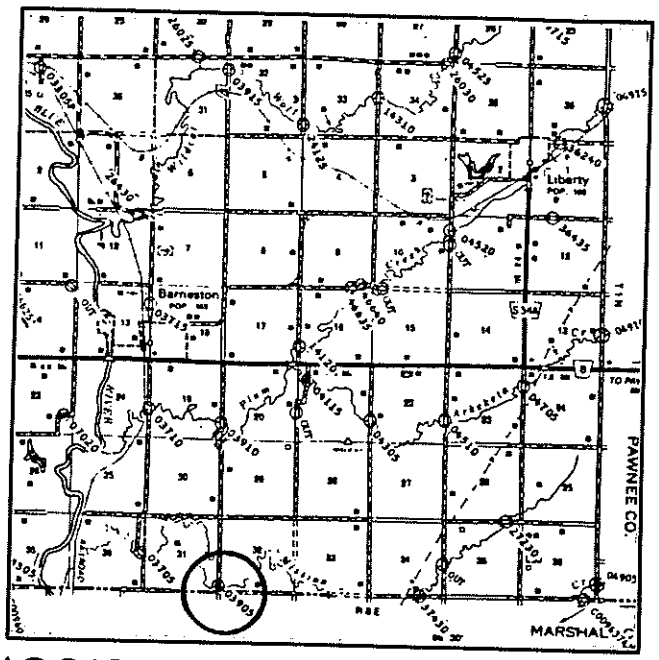
span number:	1	superstructure:	steel, 4-panel, rigid-connected Warren pony truss with timber stringer approach spans
span length:	60.0'	substructure:	I-beam pile bents (main span); timber pile bents and abutments
total length:	122.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	15.8'	other features:	upper chord: 2 angles with cover plate (channel welded on top); lower chord: 2 angles with batten plates; vertical: angles; diagonal: 2 angles with batten plates (channels welded to angles); strut: angle outriggers; floor beam: I-beams; lateral bracing: rods; guardrail: none

County records do not contain any specific information about this small-scale Warren pony truss bridge, which carries an unpaved road over Mission Creek. Pratt pony trusses were preferred after the county adopted state standard plans in 1914, so this bridge dates prior to that time. The Youngstown Bridge Company, J.H. Sparks of St. Joseph, Missouri, John Gilligan of Falls City, Nebraska, and the Standard Bridge Company of Omaha all built bridges in Gage County during the last years of the 1800s and the first decade of the 20th century.

Between 1897 and 1910, Gage County contracted for perhaps as many as two hundred of these standardized riveted Warren pony trusses. At the time of this survey, 32 still survive, of which four (**GAGE19, GAGE27, GAGE28** and **GAGE29**) best exemplify this style.

NAME(S) OF STRUCTURE
Mission Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003403905; Gage County Board of Supervisors' Records, 1874-1917, located at Gage County Courthouse, Beatrice, Nebraska; field inspection by Fred Quivik, 2 March 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C003404010

GAGE17

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
township road over Unnamed stream; S4/9, T3N, R5E
2.0 miles north of Ellis; Gage County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 27)

CONDITION
fair

OWNER
Gage County

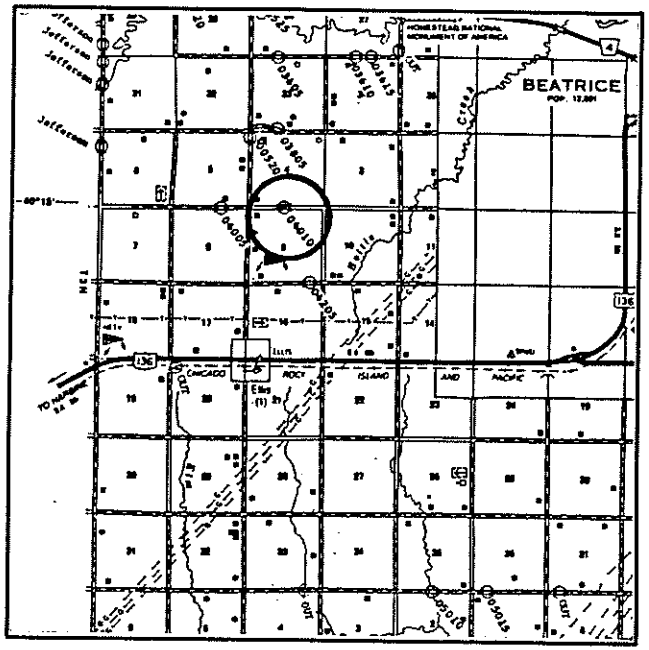
span number:	1	superstructure:	steel, 2-panel, pin-connected Pratt half-hip pony truss with timber stringer approach
span length:	30.0'	substructure:	I-beam pile bent and abutment (west); timber pile abutment with timber backwalls (east)
total length:	42.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	15.8'	other features:	upper chord: 2 channels with lacing; lower chord: looped eyebars; vertical: starred angles; diagonal: looped eyebars; strut: angles; floor beam: I-beam; lateral bracing: rods; guardrail: wood

County records do not refer specifically to this bridge. Given the bridge's design and construction, a circa 1910 construction date seems appropriate. Half-hip trusses were not built after the county adopted state standard plans in 1914. Standard Bridge Company received the county's annual bridge erection contract beginning in 1908 and for many years thereafter, and was therefore probably responsible for building this bridge. While Gage County issued detailed specifications for bridge construction, the actual plans were apparently provided by the bridge company.

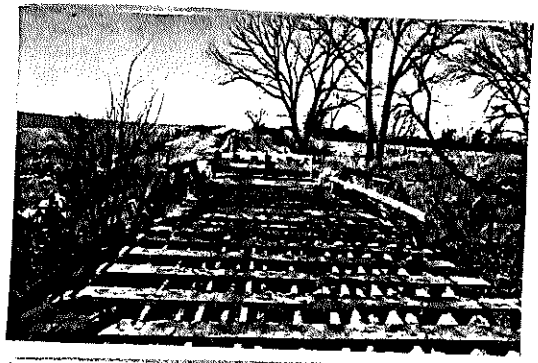
This bridge is typical of many small pony trusses built in Nebraska before use of state plans -- which did not include half-hip designs -- was mandated in 1913. The half-hip style was popular because, lacking verticals at the hips, it used less material and was therefore less expensive than a full truss.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003404010; Gage County Board of Supervisors' Records, 1874-1917, located at Gage County Courthouse, Beatrice, Nebraska; field inspection by Fred Quivik, March 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Arkeketa Creek Bridge
NDOR: C003404115

GAGE18

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
township road over Arkeketa Creek; NW1/4 S21, T1N, R8E
2.0 miles east of Barneston; Gage County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING determined NRHP non-eligible (score: 29)

CONDITION
good

OWNER
Gage County

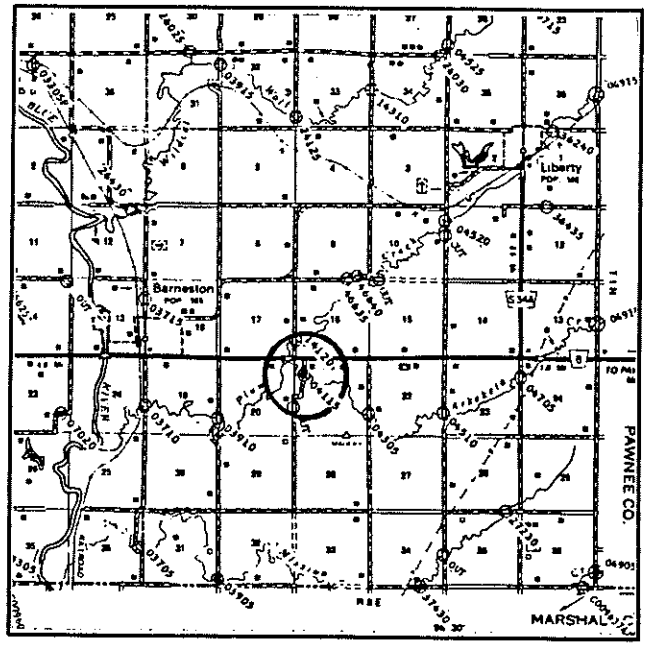
span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt half-hip pony truss
span length:	54.0'	substructure:	I-beam piles with timber backwalls
total length:	55.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	15.7'	other features:	upper chord: 2 channels with cover plate and batten plates; lower chord: looped eyebars (outer), punched eyebars (center); vertical: 2 pair angles with lacing; diagonal: looped eyebars; counters: rods; floor beam: I-beams; lateral bracing: rods; guardrail: 2 angles

County records do not refer specifically to this bridge. Given the bridge's design and construction, a circa 1910 construction date seems appropriate. Half-hip trusses were not built after the county adopted state standard plans in 1914. Standard Bridge Company received the county's annual bridge erection contract beginning in 1908 and for many years thereafter, and was therefore probably responsible for building this bridge. While Gage County issued detailed specifications for bridge construction, the actual plans were apparently provided by the bridge company.

The Arkeketa Creek Bridge is typical of many small pony trusses built in Nebraska before use of state plans -- which did not include half-hip designs -- was mandated in 1913. The half-hip style was popular because, lacking verticals at the hips, it used less material and was therefore less expensive than a full truss.

NAME(S) OF STRUCTURE
Arkeketa Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003404115; Gage County Board of Supervisors' Records, 1874-1917, located at Gage County Courthouse, Beatrice, Nebraska; field inspection by Fred Quivik, 2 March 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Mission Creek Bridge
NDOR: C003404905

GAGE19

DATE(S) OF CONSTRUCTION
1898

LOCATION
County highway over Mission Creek; S36/31, T1N, R8/9E
7.0 miles southeast of Barneston; Gage County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING determined NRHP eligible (score: 43)

CONDITION
good

OWNER
Gage County

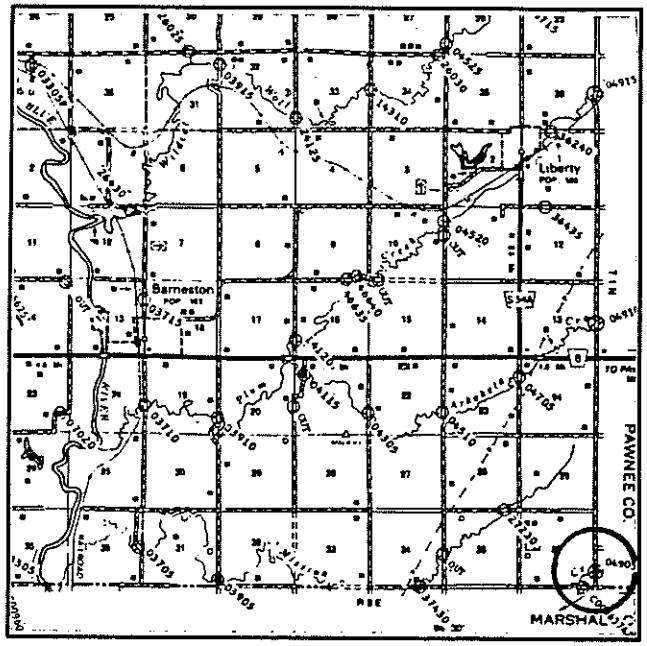
span number:	1	superstructure:	steel, 3-panel, rigid-connected Warren pony truss with timber stringer approaches
span length:	42.0'	substructure:	steel pile bent and tubular piers; timber pile abutments with timber back- and wingwalls
total length:	91.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	16.2'	other features:	upper chord: 2 angles with cover plate; lower chord: 2 angles with batten plates; vertical: angles; diagonal: 2 angles with batten plates; strut: angle outriggers; floor beam: I-beams; lateral bracing: rods; guardrail: none

This bridge was one of 28 bridges the Gage County Commissioners ordered constructed on July 20, 1898. The Youngstown Bridge Company of Youngstown, Ohio had the annual contract to construct the county's bridges that year.

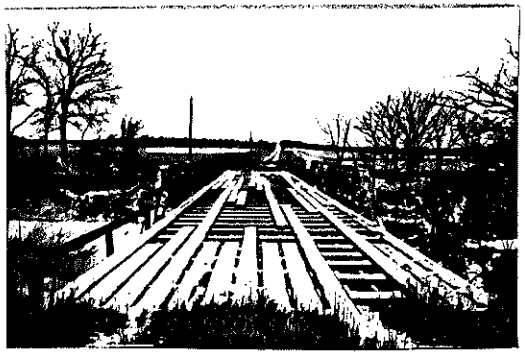
The Mission Creek Bridge is one of the three oldest of 32 small, steel, rigid-connected Warren pony trusses of a type found only in Gage County. They are characterized by a relatively light-weight superstructure and a rare suspended U-bolt connection of the floor beams to the superstructure. The Youngstown Bridge Company of Youngstown, Ohio was the first company to build these bridges in Gage County.

NAME(S) OF STRUCTURE
Mission Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003404905; Gage County Supervisors' Record, 3 and 20 March 1898, located at the Gage County Courthouse, Beatrice, Nebraska; field inspection by Fred Quivik, March 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Elm Creek Bridge
NDOR: C003405405

GAGE20

DATE(S) OF CONSTRUCTION
ca.1900

LOCATION
township road over Elm Creek; S8/17, T2N, R5E
5.0 miles south of Ellis; Gage County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 20)

CONDITION
good

OWNER
Gage County

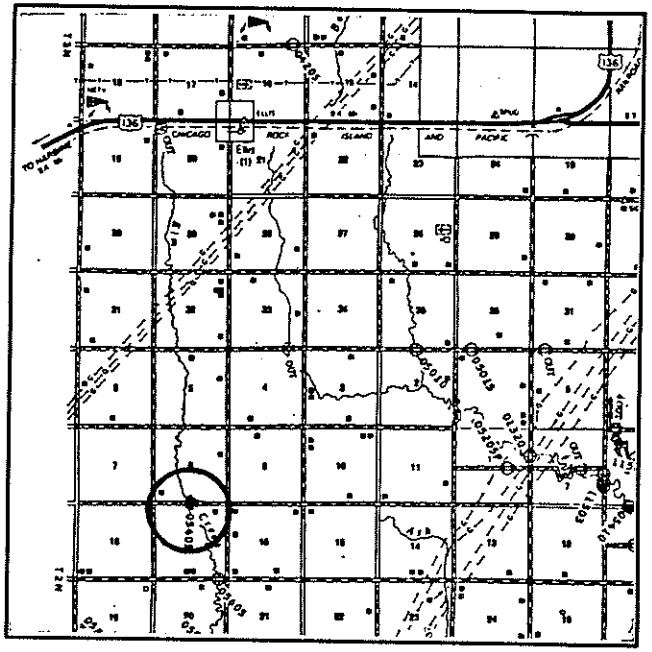
span number:	1	superstructure:	steel, 2-panel, rigid-connected Warren pony truss
span length:	30.0'	substructure:	I-beam piles with timber back- and wingwalls
total length:	32.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	15.8'	other features:	upper chord: 2 angles with cover plate; lower chord: 2 angles with batten plates; vertical: angles; diagonal: 2 angles with batten plates; strut: angle outriggers; floor beam: I-beams; lateral bracing: rods; guardrail: none

County records do not contain any specific information about this small-scale Warren pony truss bridge, which carries an unpaved road over Mission Creek. Pratt pony trusses were preferred after the county adopted state standard plans in 1914, so this bridge dates prior to that time. The Youngstown Bridge Company, J.H. Sparks of St. Joseph, Missouri, John Gilligan of Falls City, Nebraska, and the Standard Bridge Company of Omaha all built bridges in Gage County during the last years of the 1800s and the first decade of the 20th century.

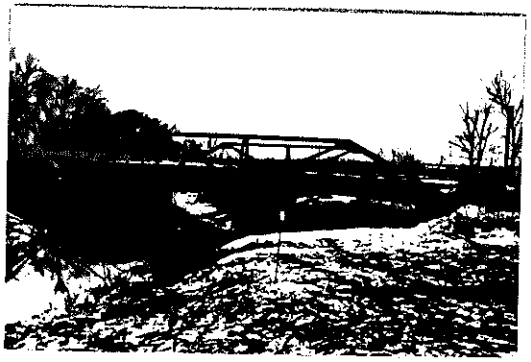
Between 1897 and 1910, Gage County contracted for perhaps as many as two hundred of these standardized riveted Warren pony trusses. At the time of this survey, 32 still survive, of which four (**GAGE19, GAGE27, GAGE28** and **GAGE29**) best exemplify this style.

NAME(S) OF STRUCTURE
Elm Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003405405; field inspection by Fred Quivik, 2 March 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Sicily Creek Bridge
NDOR: C003405410

GAGE21

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
township road over Sicily Creek; S8/17, T2N, R6E
5.7 miles west of Blue Springs; Gage County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 24)

CONDITION
good

OWNER
Gage County

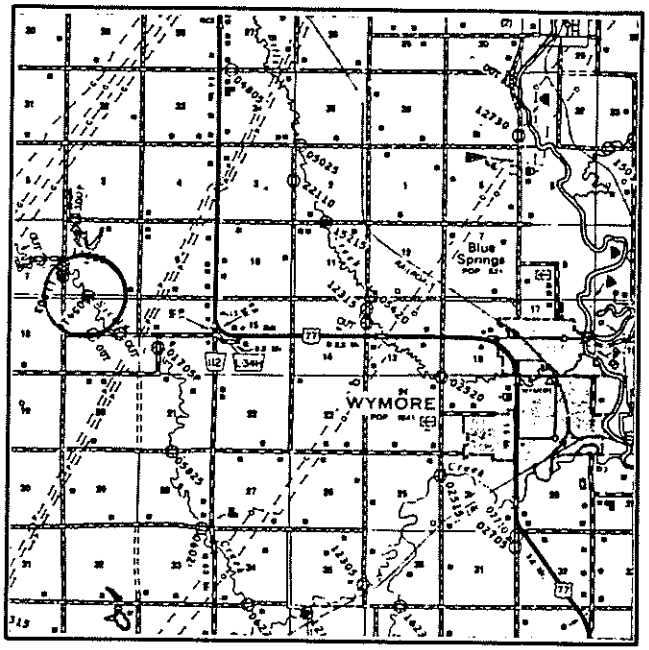
span number:	1	superstructure:	steel, 5-panel, pin-connected Pratt pony truss
span length:	80.0'	substructure:	I-beam piles with timber backwalls
total length:	81.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.6'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: punched eyebars; vertical: 2 pair angles with batten plates; diagonal: punched eyebars; counters: looped eyebars; strut: 2 angle outriggers; floor beam: I-beams; lateral bracing: rods; guardrail: 2 channels

On July 18, 1895, the Gage County Board of Supervisors granted the request by a Mr. Witzenburg to have a bridge built on the line between sections 8 and 17 in Sicily Township. Although no further details are provided about the type of structure built, the design and materials of the truss now standing at this site suggest that it dates from the 1910s and replaced the 1895 bridge. County records do not reveal any further information.

The Sicily Creek Bridge is a typical Pratt pony truss, perhaps designed from state standard plans and dating from the 1910s.

NAME(S) OF STRUCTURE
Sicily Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003405410; Gage County Board of Supervisors' Records, 1874-1917, see specifically 18 July 1895, located at Gage County Courthouse, Beatrice, Nebraska; field inspection by Fred Quivik, 2 March 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge GAGE22
NDOR: C003407015

DATE(S) OF CONSTRUCTION
1909 (?)

LOCATION
township road over unnamed stream; S22/27, T1N, R7E
2.5 miles southwest of Barneston; Gage County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 35)

CONDITION
good

OWNER
Gage County

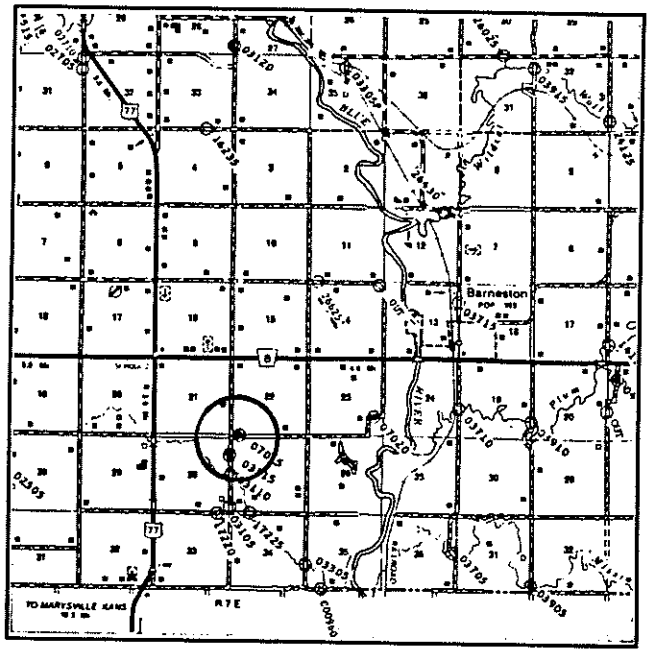
span number:	1	superstructure:	steel, 2-panel, rigid-connected Warren pony truss
span length:	30.0'	substructure:	timber pile bent abutments
total length:	32.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	15.7'	other features:	upper chord: 2 angles with cover plate; lower chord: 2 angles with batten plates; vertical: angles; diagonal: 2 angles with batten plates; strut: angle outriggers; floor beam: I-beams; lateral bracing: rods; guardrail: none

In 1909, the Gage County Supervisors ordered a 32-foot pile bridge for this location. Perhaps they changed their mind before the structure was built and substituted this Warren pony truss. If not, the truss was likely built within the next few years, because Pratt pony trusses were preferred after the county adopted state standard plans in 1914. Standard Bridge Company of Omaha received the county's annual bridge building contract from 1908 until at least 1915, and thus appears to be responsible for this bridge's construction.

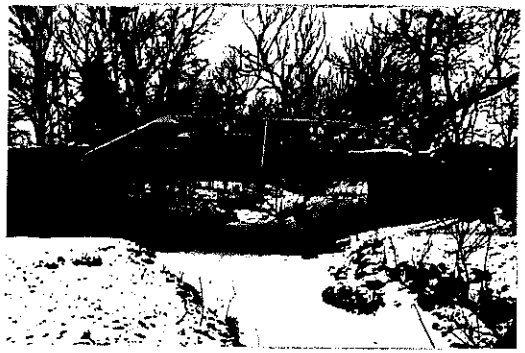
Between 1897 and 1910, Gage County contracted for perhaps as many as two hundred of these standardized riveted Warren pony trusses. At the time of this survey, 32 still survive, of which four (**GAGE19**, **GAGE27**, **GAGE28** and **GAGE29**) best exemplify this style.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003407015; Gage County Supervisors' Record, 1874 to 1917, see specifically 4 September 1909, located at the Gage County Courthouse, Beatrice, Nebraska; field inspection by Fred Quivik, 2 March 1989.

INVENTORIED BY	AFFILIATION	DATE
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C003407020

GAGE23

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
township road over unnamed stream; SE1/4 S23, T1N, R7E
1.0 mile southwest of Barneston; Gage County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 29)

CONDITION
good

OWNER
Gage County

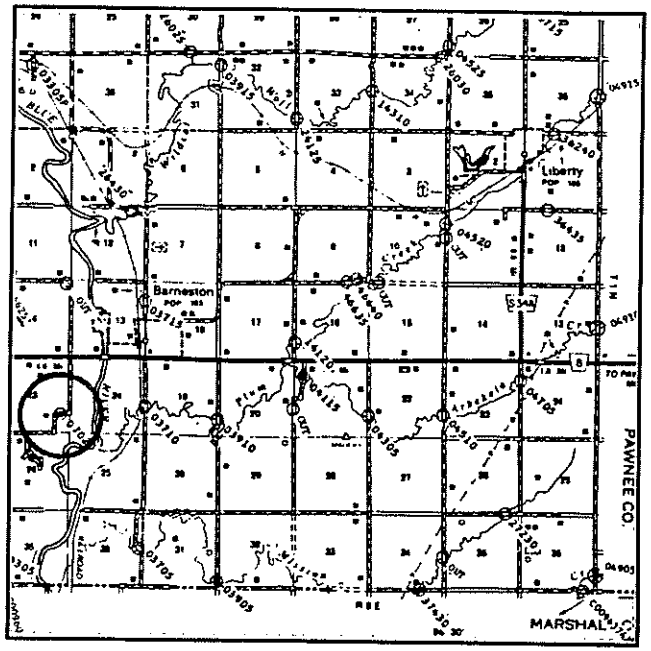
span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt half-hip pony truss
span length:	70.0'	substructure:	concrete abutments
total length:	70.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	15.4'	other features:	upper chord: 2 angles with cover plate and batten plates; lower chord: looped eyebars (outer), punched eyebars (center); vertical: 2 pair angles with lacing; diagonal: looped eyebars; counters: rods; floor beam: I-beams; lateral bracing: rods; guardrail: wood

A 40-foot pile bridge was built at this site in 1904. County records do not refer specifically to subsequent construction at this location. Given the bridge's design and materials, a circa 1910 construction date seems appropriate. Half-hip trusses were not built after the county adopted state standard plans in 1914. Standard Bridge Company received the county's annual bridge erection contract beginning in 1908 and for many years thereafter, and was therefore probably responsible for building this bridge. While Gage County issued detailed specifications for bridge construction, the actual plans were apparently provided by the bridge company.

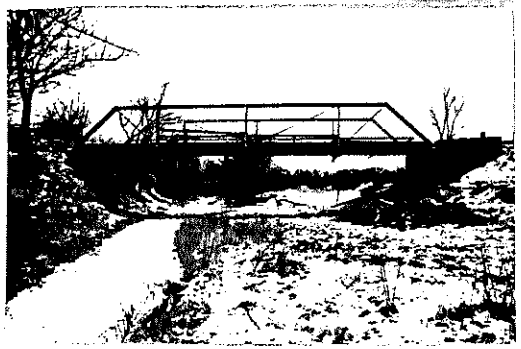
This bridge is typical of many small pony trusses built in Nebraska before use of state plans - which did not include half-hip designs - was mandated in 1913. The half-hip style was popular because, lacking verticals at the hips, it used less material and was therefore less expensive than a full truss.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003407020; Gage County Board of Supervisors' Records, 1874-1917, see specifically 14 July 1904, located at Gage County Courthouse, Beatrice, Nebraska; field inspection by Fred Quivik, 2 March 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C003407215

GAGE24

DATE(S) OF CONSTRUCTION
ca.1905

LOCATION
township road over unnamed stream; S25/36, R1N, R6E
6.0 miles southeast of Odell; Gage County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING determined NRHP non-eligible (score: 20)

CONDITION
good

OWNER
Gage County

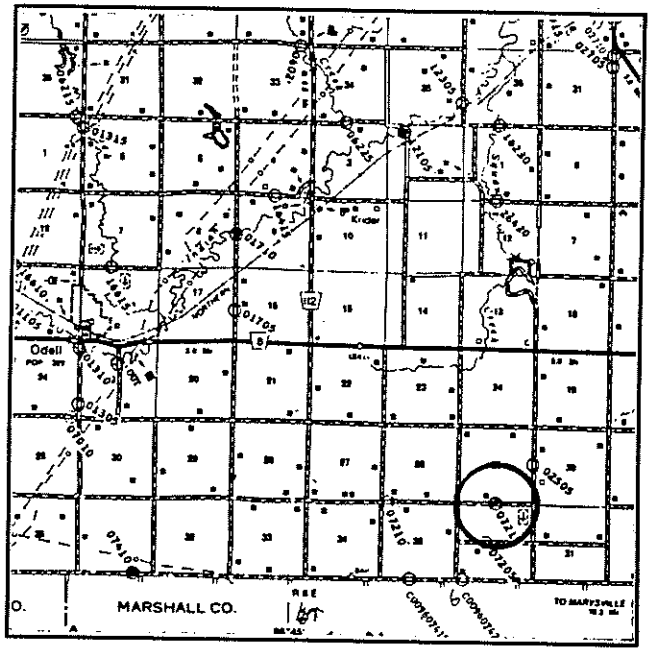
span number:	1	superstructure:	steel, 2-panel, rigid-connected Warren pony truss
span length:	30.0'	substructure:	timber pile bent abutments
total length:	31.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	15.7'	other features:	upper chord: 2 angles with cover plate; lower chord: 2 angles with batten plates; vertical: angles; diagonal: 2 angles with batten plates; strut: angle outriggers; floor beam: I-beams; lateral bracing: rods; guardrail: none

County records do not contain any specific information about this small-scale Warren pony truss bridge. Pratt pony trusses were preferred after the county adopted state standard plans in 1914, so this bridge dates prior to that time. The Youngstown Bridge Company, J.H. Sparks of St. Joseph, Missouri, John Gilligan of Falls City, Nebraska, and the Standard Bridge Company of Omaha all built bridges in Gage County during the last years of the 1800s and the first decade of the 20th century.

Between 1897 and 1910, Gage County contracted for perhaps as many as two hundred of these standardized riveted Warren pony trusses. At the time of this survey, 32 still survive, of which four (**GAGE19, GAGE27, GAGE28** and **GAGE29**) best exemplify this style.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003407215; Gage County Board of Supervisors' Records, 1874-1917, located at Gage County Courthouse, Beatrice, Nebraska; field inspection by Fred Quivik, 2 March 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge GAGE25
NDOR: C003407410

DATE(S) OF CONSTRUCTION
ca.1900

LOCATION
township road over unnamed stream; south edge S31, T1N, R6E
3.0 miles south of Odell; Gage County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 20)

CONDITION
good

OWNER
Gage County

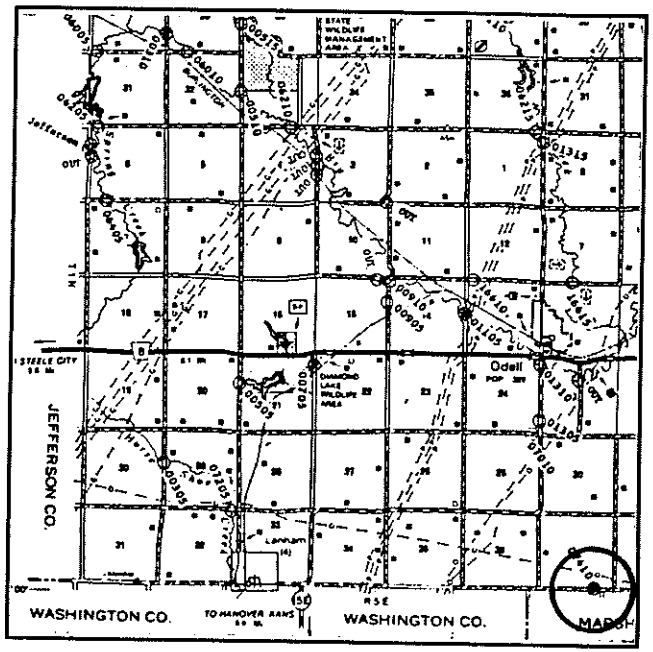
span number:	1	superstructure:	steel, 2-panel, rigid-connected Warren pony truss
span length:	30.0'	substructure:	timber pile bent abutments
total length:	32.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	15.8'	other features:	upper chord: 2 angles with cover plate; lower chord: 2 angles with batten plates; vertical: angles; diagonal: 2 angles with batten plates; strut: angle outriggers; floor beam: I-beams; lateral bracing: rods; guardrail: none

County records do not contain any specific information about this small-scale Warren pony truss bridge. Pratt pony trusses were preferred after the county adopted state standard plans in 1914, so this bridge dates prior to that time. The Youngstown Bridge Company, J.H. Sparks of St. Joseph, Missouri, John Gilligan of Falls City, Nebraska, and the Standard Bridge Company of Omaha all built bridges in Gage County during the last years of the 1800s and the first decade of the 20th century.

Between 1897 and 1910, Gage County contracted for perhaps as many as two hundred of these standardized riveted Warren pony trusses. At the time of this survey, 32 still survive, of which four (**GAGE19**, **GAGE27**, **GAGE28** and **GAGE29**) best exemplify this style.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003407410; Gage County Board of Supervisors' Records, 1874-1917, located at Gage County Courthouse, Beatrice, Nebraska; field inspection by Fred Quivik, 2 March 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Indian Creek Bridge
NDOR: C003411225

GAGE26

DATE(S) OF CONSTRUCTION
1899

LOCATION
township road over Indian Creek; S25/36, T6N, R6E
3.5 miles south of Courtland; Gage County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 34)

CONDITION
good

OWNER
Gage County

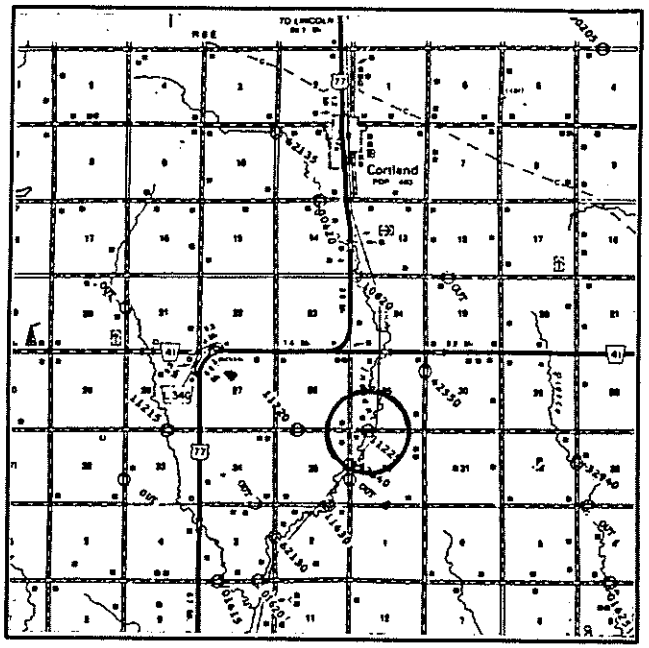
span number:	1	superstructure:	steel, 2-panel, rigid-connected Warren pony truss with timber stringer approach spans
span length:	30.0'	substructure:	timber pile bents and abutments with timber back- and wingwalls
total length:	65.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	15.8'	other features:	upper chord: 2 angles with cover plate; lower chord: 2 angles with batten plates; vertical: angles; diagonal: 2 angles with batten plates; strut: angle outriggers; floor beam: I-beams; lateral bracing: rods; guardrail: none

On November 13, 1899, the Gage County Supervisors authorized the bridge committee to rebuild the existing bridge at this location or have it replaced. J.H. Sparks of St. Joseph, Missouri had the annual contract to build all the county's bridges that year.

Between 1897 and 1910, Gage County contracted for perhaps as many as two hundred of these standardized riveted Warren pony trusses. At the time of this survey, 32 still survive, of which four (GAGE19, GAGE27, GAGE28 and GAGE29) best exemplify this style.

NAME(S) OF STRUCTURE
Indian Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003411225; Gage County Supervisors Record, 1874-1917, see specifically 16 February and 13 November 1899; field inspection by Fred Quivik, 6 March 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C003411503

GAGE27

DATE(S) OF CONSTRUCTION
1898

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

LOCATION
township road over unnamed stream; S7/8, T2N, R6E
6.0 miles northwest of Wymore; Gage County, Nebraska

RATING determined NRHP eligible (score: 43)

CONDITION
good

OWNER
Gage County

span number: 1
span length: 30.0'
total length: 32.0'
roadway wdt.: 15.8'

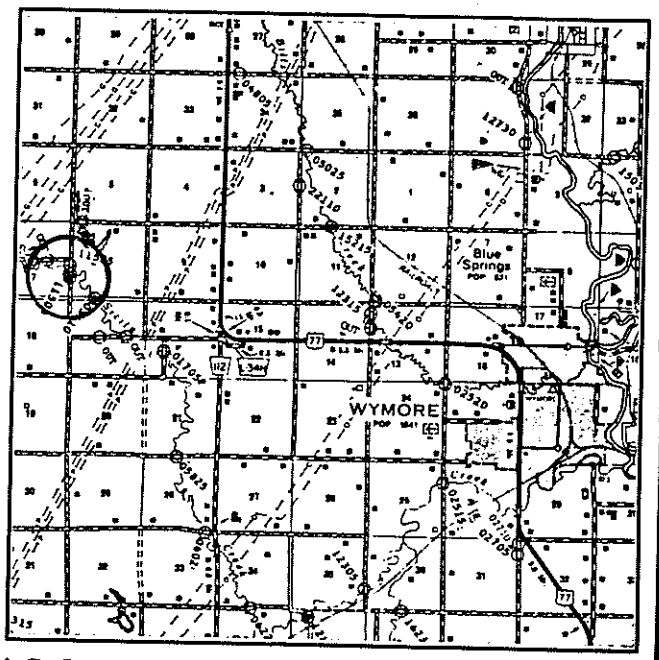
superstructure: steel, 2-panel, rigid-connected Warren pony truss
substructure: timber piles with timber backwalls
floor/decking: timber deck over timber stringers
other features: upper chord: 2 angles with cover plate; lower chord: 2 angles with batten plates; vertical: angles; diagonal: 2 angles with batten plates; strut: angle outriggers; floor beam: I-beams; lateral bracing: rods; guardrail: none

This bridge was one of 28 bridges the Gage County Commissioners ordered constructed on July 20, 1898. The Youngstown Bridge Company of Youngstown, Ohio had the annual contract to construct the county's bridges that year.

This bridge is one of the three oldest of 32 small, steel, rigid-connected Warren pony trusses of a type found only in Gage County. They are characterized by a relatively light-weight superstructure and a rare suspended U-bolt connection of the floor beams to the superstructure. The Youngstown Bridge Company of Youngstown, Ohio was the first company to build these bridges in Gage County.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003411503; Gage County Supervisors' Record, 3 and 20 March 1898, located at the Gage County Courthouse, Beatrice, Nebraska; field inspection by Fred Quivik, March 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Big Indian Creek Bridge
NDOR: C003412105

GAGE28

DATE(S) OF CONSTRUCTION
1903

LOCATION
township road over Big Indian Creek; NW1/4 S2, T1N, R6E
3.0 miles southwest of Wymore; Gage County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / abandoned

RATING determined NRHP eligible (score: 39)

CONDITION
good

OWNER
Gage County

span number: 1
span length: 60.0'
total length: 127.0'
roadway wdt.: 15.9'

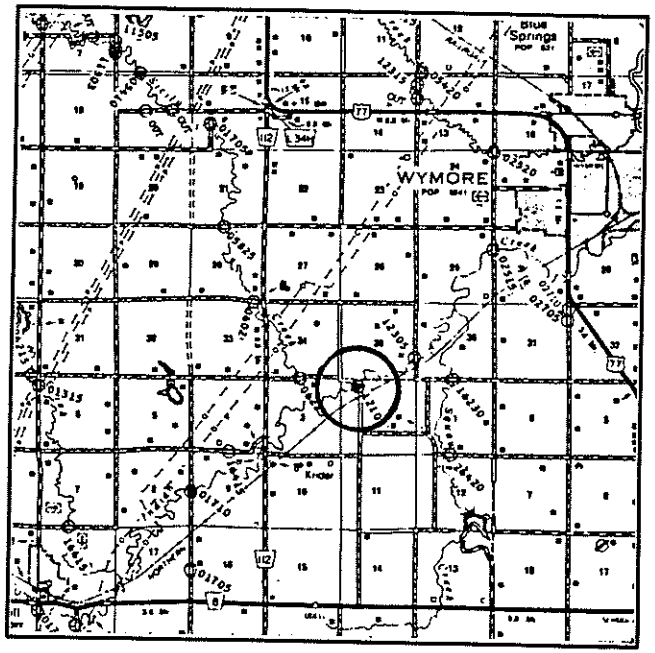
superstructure: steel, 4-panel, rigid-connected Warren pony truss with timber stringer approaches
substructure: I-beam bents (main span); timber pile bents and abutments (approach spans)
floor/decking: removed
other features: upper chord: 2 angles with cover plate; lower chord: 2 angles with batten plates; vertical: angles; diagonal: 2 angles with batten plates; strut: angle outriggers; floor beam: I-beams; lateral bracing: rods; guardrail: none

This bridge was one of 18 bridges the Gage County Commissioners ordered constructed on July 31, 1903. J.H. Sparks of St. Joseph, Missouri had the annual contract to construct the county's bridges from 1899 through 1904.

Between 1897 and 1910, Gage County contracted for perhaps as many as two hundred of these standardized riveted Warren pony trusses. At the time of this survey, 32 still survive. The 60-foot span of the Big Indian Creek Bridge is significant as the longest of these survivors.

NAME(S) OF STRUCTURE
Big Indian Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003412105; Gage County Supervisors' Record, 1874-1917, see specifically 1 April and 31 July 1903, located at the Gage County Courthouse, Beatrice, Nebraska; field inspection by Fred Quivik, 2 March 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bloody Run Bridge
NDOR: C003413925

GAGE29

DATE(S) OF CONSTRUCTION
1898

LOCATION
township road over Bloody Run; S19/20, T3N, R8E
4.0 miles southwest of Virginia; Gage County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING determined NRHP eligible (score: 43)

CONDITION
good

OWNER
Gage County

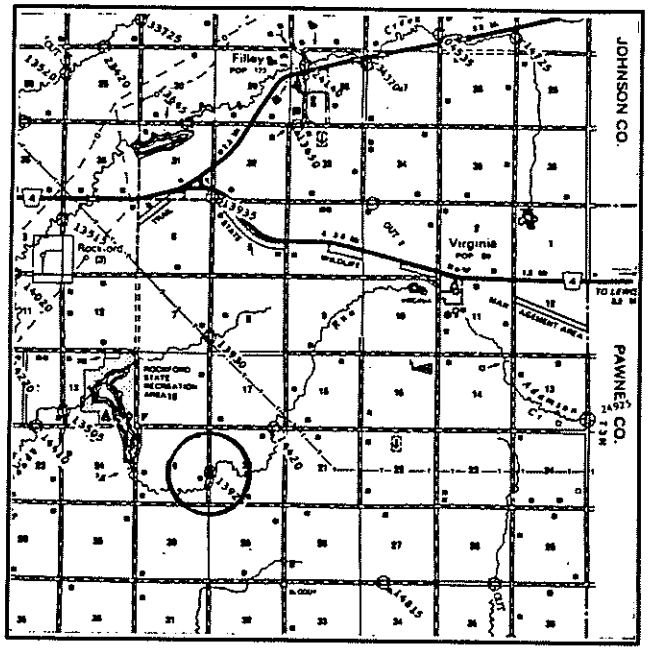
span number:	1	superstructure:	steel, 2-panel, rigid-connected Warren pony truss with timber stringer approach span
span length:	30.0'	substructure:	I-beam pile bent pier; timber/steel pile bent abutments with timber back- and wingwalls
total length:	51.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	15.5'	other features:	upper chord: 2 angles with cover plate; lower chord: 2 angles with batten plates; vertical: angles; diagonal: 2 angles with batten plates; strut: angle outriggers; floor beam: I-beams; lateral bracing: rods; guardrail: none

This bridge was one of 28 bridges the Gage County Commissioners ordered constructed on July 20, 1898. The Youngstown Bridge Company of Youngstown, Ohio had the annual contract to construct the county's bridges that year.

The Bloody Run Bridge is one of the three oldest of 32 small, steel, rigid-connected Warren pony trusses of a type found only in Gage County. They are characterized by a relatively light-weight superstructure and a rare suspended U-bolt connection of the floor beams to the superstructure. The Youngstown Bridge Company of Youngstown, Ohio was the first company to build these bridges in Gage County.

NAME(S) OF STRUCTURE
Bloody Run Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C0034; Gage County Supervisors' Record, 1874-1917, see specifically 3 March and 20 March 1898, located at the Gage County Courthouse, Beatrice, Nebraska; field inspection by Fred Quivik, 3 March 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Mud Creek Bridge
NDOR: C003414220

GAGE30

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
township road over Mud Creek; S11.14, T3N, R7E
1.0 mile southwest of Rockford; Gage County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 29)

CONDITION
good

OWNER
Gage County

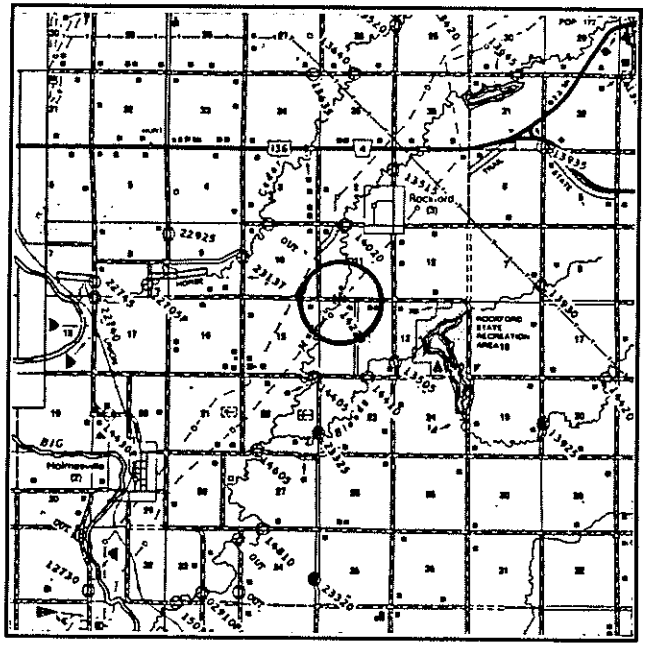
span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt half-hip pony truss
span length:	54.0'	substructure:	I-beam piles with timber back- and wingwalls
total length:	55.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	15.6'	other features:	upper chord: 2 channels with cover plate and batten plates; lower chord: looped eyebars (outer), punched eyebars (center); vertical: 2 angles with lacing; diagonal: looped eyebars; counters rods; floor beam: I-beam; lateral bracing: rods; guardrail: lattice

The Gage County Board of Supervisors voted to build a 32-foot steel span with a 24-foot approach at this site in 1901. County records note that this bridge was damaged by heavy rains in 1905, and again required repair in 1909. It was either at this time or within a few years thereafter that the 54-foot truss now at this location was probably built. Half-hip trusses were not built after the county adopted state standard plans in 1914. Standard Bridge Company received the county's annual bridge erection contract beginning in 1908 and for many years thereafter, and was therefore probably responsible for building this bridge. While Gage County issued detailed specifications for bridge construction, the actual plans were apparently provided by the bridge company.

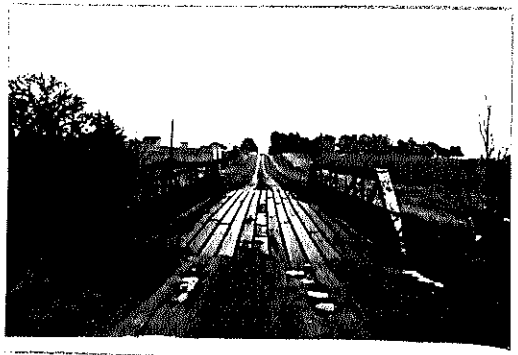
The Mud Creek Bridge is typical of many small pony trusses built in Nebraska before use of state plans - which did not include half-hip designs - was mandated in 1913. The half-hip style was popular because, lacking verticals at the hips, it used less material and was therefore less expensive than a full truss.

NAME(S) OF STRUCTURE
Mud Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003414220; Gage County Board of Supervisors' Records, 1874-1917, see specifically 24 August 1901, 20 September 1905, 4 September 1909, located at Gage County Courthouse, Beatrice, Nebraska; field inspection by Fred Quivik, 3 March 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Hooker Creek Bridge
NDOR: C003414740

GAGE31

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
township road over Hooker Creek; S11/12, T5N, R8E
2.5 miles southeast of Adams; Gage County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 24)

CONDITION
good

OWNER
Gage County

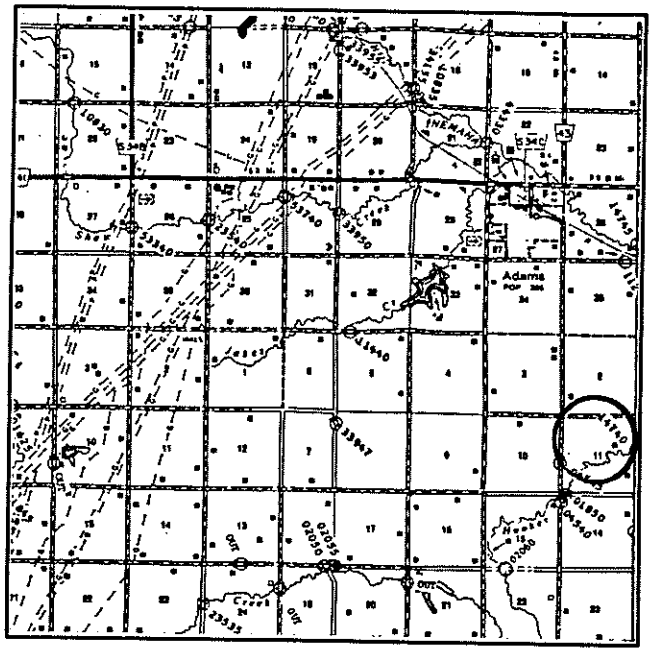
span number:	1	superstructure:	steel, 5-panel, pin-connected Pratt pony truss
span length:	100.0'	substructure:	concrete abutments with wingwalls
total length:	102.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	14.8'	other features:	upper chord: 2 channels with cover plate and batten plates; lower chord: punched eyebars; vertical: 2 pair angles with batten plates; diagonal: punched eyebars; counters: looped eyebars; floor beam: I-beams; guardrail: 2 channels

County records do not refer specifically to the construction of this bridge. The design, however, is typical of the Pratt pony truss bridges built from standard plans developed by the state engineer's office. Gage County adopted the state's plans in 1914.

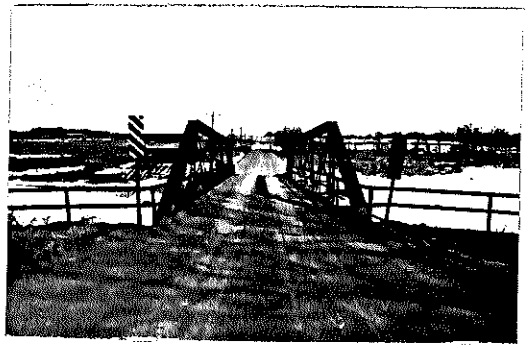
Measuring about 100 feet, this is the longest span for which pony trusses were recommended in the 1910s and 1920s; through trusses were used where longer spans were needed. The bridge is otherwise typical of the many Pratt pony trusses erected throughout Nebraska in the 1910s from state standard plans.

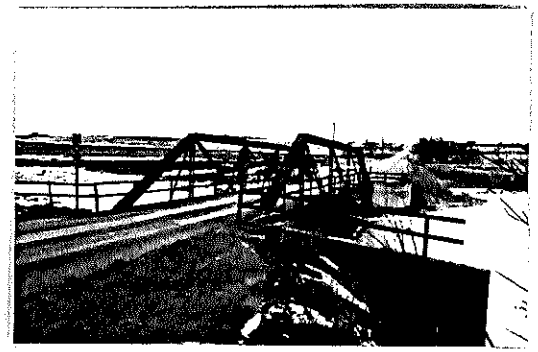
NAME(S) OF STRUCTURE
Hooker Creek Bridge

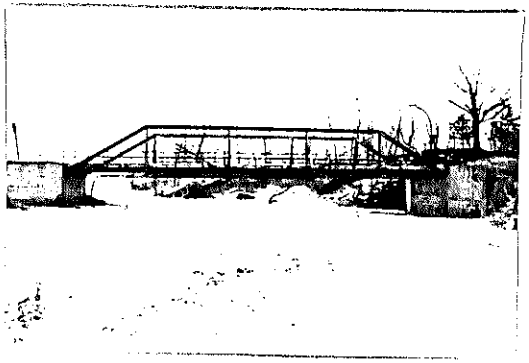
PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP







SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003414740; Gage County Board of Supervisors' Records, 1874-1917, located at Gage County Courthouse, Beatrice, Nebraska; field inspection by Fred Quivik, 4 March 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bills Creek Bridge
NDOR: C003415215

GAGE32

DATE(S) OF CONSTRUCTION
1899

LOCATION
township road over Bills Creek; S2/11, T2N, R6E
2.7 miles northwest of Blue Springs; Gage County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 34)

CONDITION
good

OWNER
Gage County

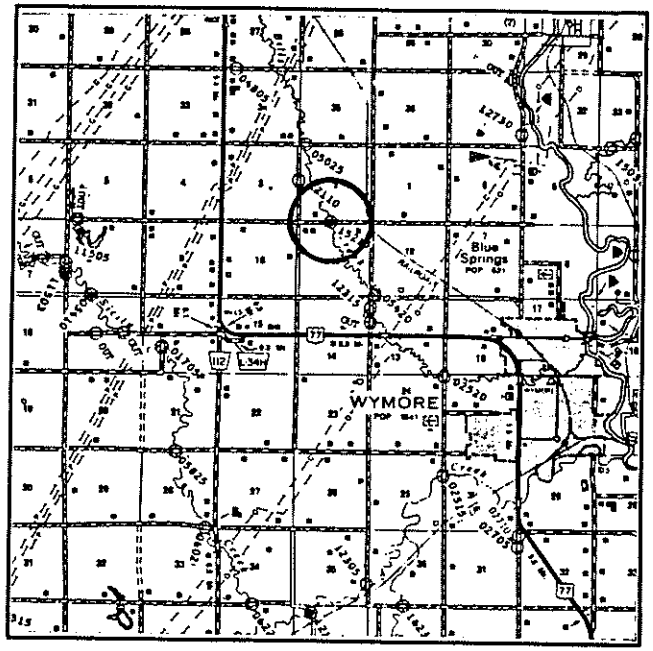
span number:	1	superstructure:	steel, 2-panel, rigid-connected Warren pony truss with timber stringer approach spans
span length:	30.0'	substructure:	timber pile bents and abutments with timber back- and wingwalls
total length:	63.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	15.5'	other features:	upper chord: 2 angles with cover plate; lower chord: 2 angles with batten plates; vertical: angles; diagonal: 2 angles with batten plates; strut: angle outriggers; floor beam: I-beams; lateral bracing: rods; guardrail: none

This bridge was one of 44 bridges the Gage County Commissioners ordered constructed on June 28, 1899. J.H. Sparks of St. Joseph, Missouri had the annual contract to construct the county's bridges from 1899 through 1904.

Between 1897 and 1910, Gage County contracted for perhaps as many as two hundred of these standardized riveted Warren pony trusses. At the time of this survey, 32 still survive. They are characterized by a relatively light-weight superstructure and a rare suspended U-bolt connection of the floor beams to the superstructure. The Youngstown Bridge Company of Youngstown, Ohio was the first company to build these bridges in Gage County; J.H. Sparks received the county's annual bridge building contract from 1899 to 1904.

NAME(S) OF STRUCTURE
Bills Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003415215; field inspection by Fred Quivik, 3 March 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Wildcat Creek Bridge
NDOR: C003415620

GAGE33

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
township road over Wildcat Creek; S17/20, T2N, R8E
6.0 miles east of Wymore; Gage County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 29)

CONDITION
good

OWNER
Gage County

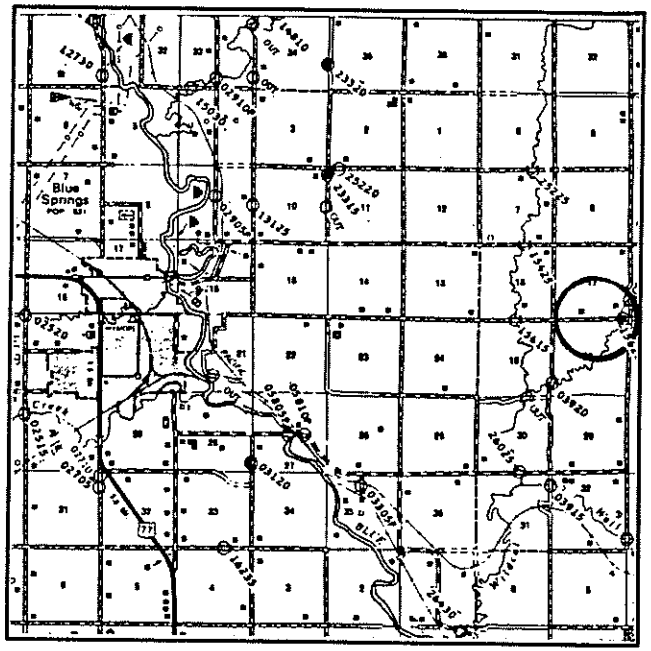
span number:	1	superstructure:	steel, pin-connected Pratt half-hip pony truss
span length:	54.0'	substructure:	steel pile bent abutments
total length:	55.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.4'	other features:	lattice guardrail

County records do not refer specifically to this structure. Given the bridge's design and materials, a circa 1910 construction date seems appropriate. Half-hip trusses were not built after the county adopted state standard plans in 1914. Standard Bridge Company received the county's annual bridge erection contract beginning in 1908 and for many years thereafter, and was therefore probably responsible for building this bridge. While Gage County issued detailed specifications for bridge construction, the actual plans were apparently provided by the bridge company.

This bridge is typical of many small pony trusses built in Nebraska before use of state plans - which did not include half-hip designs - was mandated in 1913. The half-hip style was popular because, lacking verticals at the hips, it used less material and was therefore less expensive than a full truss.

NAME(S) OF STRUCTURE
Wildcat Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C0034; field inspection by Fred Quivik, March 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Snake Creek Bridge
NDOR: C003421135

GAGE34

DATE(S) OF CONSTRUCTION
1910 (?)

LOCATION
township road over Snake Creek; S35/36, T5N, R5E
2.75 miles northeast of Hoag; Gage County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 33)

CONDITION
good

OWNER
Gage County

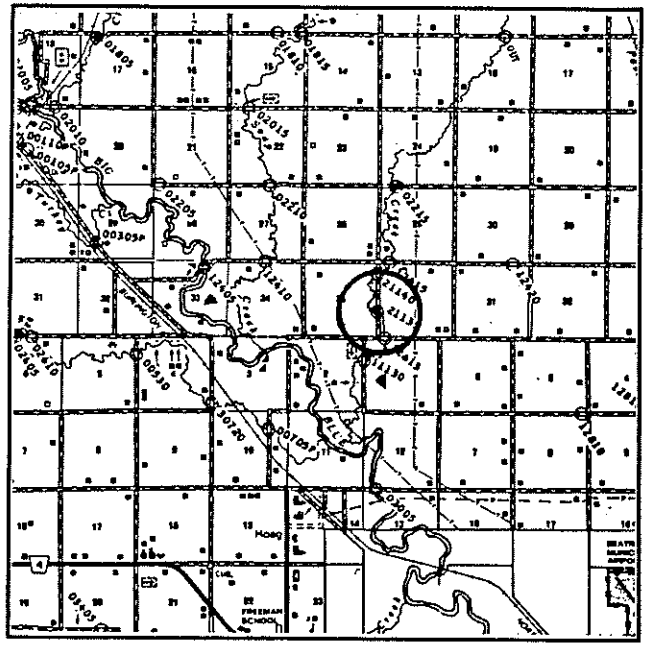
span number:	1	superstructure:	steel, 3-panel, rigid-connected Warren pony truss
span length:	40.0'	substructure:	timber piles with timber back- and wingwalls
total length:	42.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	15.6'	other features:	upper chord: 2 angles with cover plate; lower chord: 2 angles with batten plates; vertical: angles; diagonal: 2 angles with batten plates; strut: angle outriggers; floor beam: I-beams; lateral bracing: rods; guardrail: none

The Gage County Board of Supervisors appears to have ordered that a 24-foot pile bridge be built at this location in 1910. Perhaps they changed their mind before the structure was built and substituted this Warren pony truss. If not, the truss was likely built within the next few years, because Pratt pony trusses were preferred after the county adopted state standard plans in 1914. Standard Bridge Company of Omaha received the county's annual bridge building contract from 1908 until at least 1915, and thus appears to be responsible for this bridge's construction.

Between 1897 and 1910, Gage County contracted for perhaps as many as two hundred of these standardized riveted Warren pony trusses. At the time of this survey, 32 still survive, of which four (C003404905, C003411503, C003412105, and C003413925) best exemplify this style.

NAME(S) OF STRUCTURE
Snake Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003421135; Gage County Board of Supervisors' Records, 1874-1917, see specifically 4 September 1909, located at Gage County Courthouse, Beatrice, Nebraska; field inspection by Fred Quivik, 6 March 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C003423315

GAGE35

DATE(S) OF CONSTRUCTION
ca.1900

LOCATION
township road over unnamed stream; S10/11, T2N, R7E
2.5 miles northeast of Wymore; Gage County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 20)

CONDITION
good

OWNER
Gage County

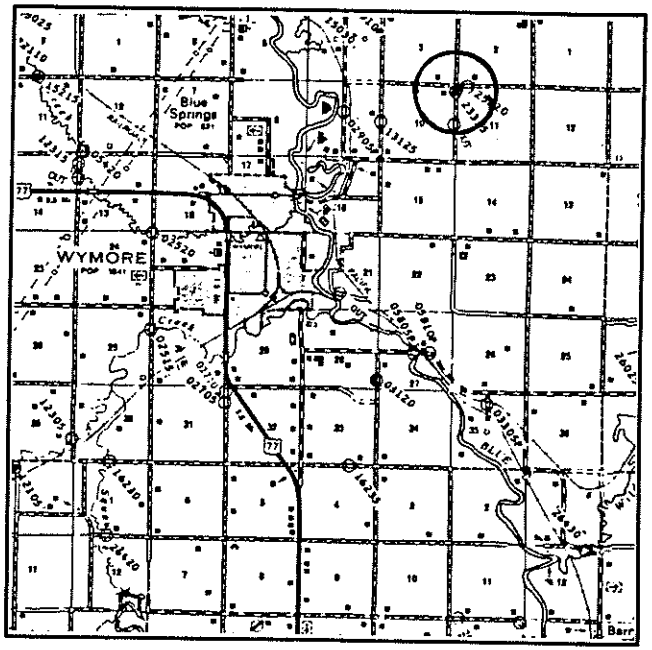
span number:	1	superstructure:	steel, 2-panel, pin-connected Pratt half-hip pony truss with timber stringer approach
span length:	27.0'	substructure:	I-beam bent; concrete abutment (north); timber piles (south)
total length:	43.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	15.4'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: rods; vertical: 2 pair angles with lattice; diagonal: looped eyebars; floor beam: I-beams; lateral bracing: rods; guardrail: none

County records do not refer specifically to the construction of this bridge. Half-hip trusses were not built after the county adopted state standard plans in 1914, so this bridge probably dates from the first decade of the 20th century. While Gage County issued detailed specifications for bridge construction, the actual plans were apparently provided by the bridge company.

This bridge is typical of many small pony trusses built in Nebraska before use of state plans - which did not include half-hip designs - was mandated in 1913. The half-hip style was popular because, lacking verticals at the hips, it used less material and was therefore less expensive than a full truss.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003423315; Gage County Board of Supervisors' Records, 1874-1917, located at Gage County Courthouse, Beatrice, Nebraska; field inspection by Fred Quivik, 3 March 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C003423320

GAGE36

DATE(S) OF CONSTRUCTION
1900

LOCATION
township road over unnamed stream; S34/35, T3N, R7E
2.5 miles southeast of Holmesville; Gage County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 29)

CONDITION
good

OWNER
Gage County

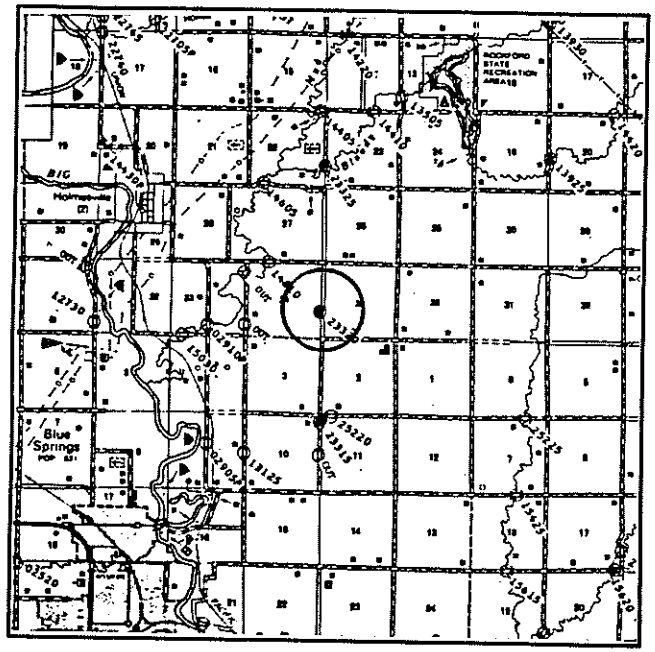
span number:	1	superstructure:	steel, 2 panel, rigid-connected Warren pony truss
span length:	30.0'	substructure:	I-beam piles with timber back- and wingwalls
total length:	32.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	15.8'	other features:	upper chord: 2 angles with cover plate; lower chord: 2 angles with batten plates; vertical: angles; diagonal: 2 angles with batten plates; strut: angle outriggers; floor beam: I-beams; lateral bracing: rods; guardrail: none

This bridge was one of 33 bridges the Gage County Commissioners ordered constructed on August 30, 1900. J.H. Sparks of St. Joseph, Missouri had the annual contract to construct the county's bridges from 1899 through 1904.

Between 1897 and 1910, Gage County contracted for perhaps as many as two hundred of these standardized riveted Warren pony trusses. At the time of this survey, 32 still survive, of which four (C003404905, C003411503, C003412105, and C003413925) best exemplify this style.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003423320; Gage County Supervisors' Record, 30 August 1900, located at the Gage County Courthouse, Beatrice Nebraska; field inspection by Fred Quivik, 3 March 1989.

INVENTORIED BY	AFFILIATION	DATE
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bloody Run Bridge
NDOR: C003423325

GAGE37

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
township road over Bloody Run; S22/23, T3N, R7E
2.5 miles east of Holmesville; Gage County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 32)

CONDITION
good

OWNER
Gage County

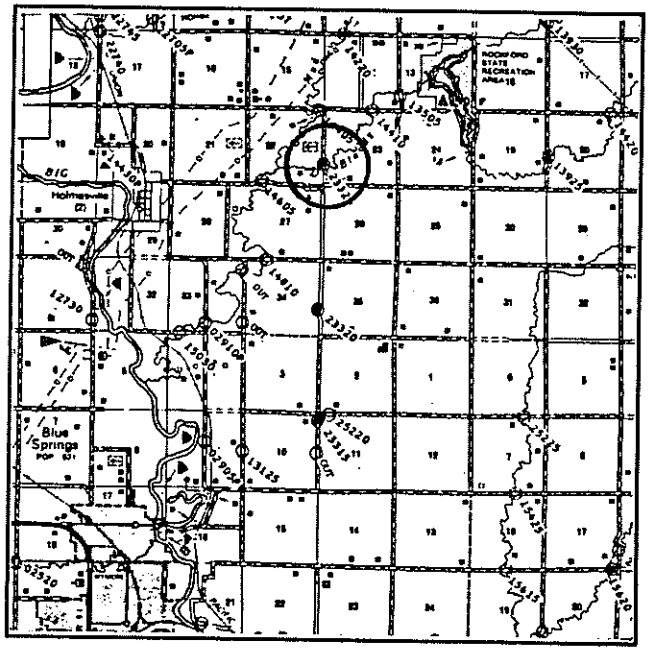
span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt half-hip pony truss
span length:	60.0'	substructure:	I-beam piles with timber back- and wingwalls
total length:	60.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	15.5'	other features:	upper chord: 2 channels with cover plate and batten plates; lower chord: looped eyebars (outer), punched eyebars (inner); vertical: 2 pair angles with lacing; diagonal: looped eyebars; counters: rods; floor beams: I-beams; lateral bracing: rods; guardrail: lattice

The Gage County Board of Supervisors ordered construction of a 32-foot iron bridge at this site in 1897. County records do not refer specifically to the existing span, a 60-foot half-hip Pratt truss. Given the bridge's design and materials, a circa 1910 construction date seems appropriate. Half-hip trusses were not built after the county adopted state standard plans in 1914. Standard Bridge Company received the county's annual bridge erection contract beginning in 1908 and for many years thereafter, and was therefore probably responsible for building this bridge. While Gage County issued detailed specifications for bridge construction, the actual plans were apparently provided by the bridge company.

This bridge is typical of many small pony trusses built in Nebraska before use of state plans - which did not include half-hip designs - was mandated in 1913. The half-hip style was popular because, lacking verticals at the hips, it used less material and was therefore less expensive than a full truss.

NAME(S) OF STRUCTURE
Bloody Run Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003423325; Gage County Board of Supervisors' Records, 1874-1917, see specifically 23 July 1897, located at Gage County Courthouse, Beatrice, Nebraska; field inspection by Fred Quivik, 3 March 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Mission Creek Bridge
NDOR: C003437430

GAGE38

DATE(S) OF CONSTRUCTION
1899

LOCATION
Township road over Mission Creek; S34, T1N, R8E
8.0 miles east of U.S. 77 on Kansas state line; Gage County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 25)

CONDITION
good

OWNER
Gage County

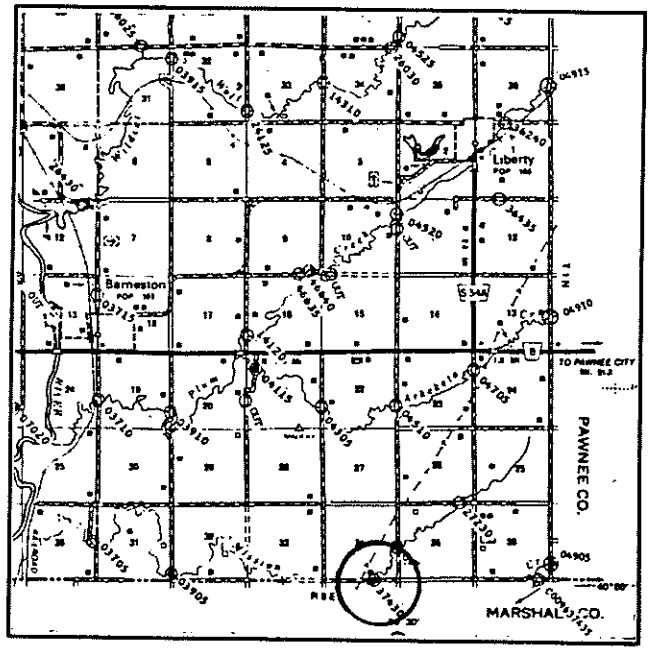
span number:	1	superstructure:	steel, 2-panel, rigid-connected Warren pony truss
span length:	30.0'	substructure:	I-beam piles with timber backwalls
total length:	32.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	15.9'	other features:	upper chord: 2 angles with cover plate; lower chord: 2 angles with batten plates; vertical: angle; diagonal: 2 angles with batten plates; sway: angle; floor beam: I-beam; lateral bracing: rods

This bridge was one of 44 bridges the Gage County Supervisors' ordered constructed on June 28, 1899. J.H. Sparks of St. Joseph, Missouri held the annual contract to construct the county's bridges from 1899 through 1904.

This bridge is typical of the many small structures built by the counties at the turn of the century in response to the public's demand for adequate transportation networks. Unlike many similar structures, the builder and the construction date for this bridge are documented. The bridge may also have significance for its association with the bridge builder, J.H. Sparks of St. Joseph, Missouri.

NAME(S) OF STRUCTURE
Mission Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003437430; Gage County Supervisors' Record, 28 June 1899, located at the Gage County Courthouse, Beatrice, Nebraska; field inspection by Fred Quivik, 2 March 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
DeWitt Mill Bridge [Big Blue River Bridge] GAGE39
NDOR: none

DATE(S) OF CONSTRUCTION
1887

LOCATION
vacated county road over the Big Blue River; S19, T5N, R5E
DeWitt; Gage County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / closed

RATING NRHP listed (score: 60)

CONDITION
fair

OWNER
private

span number: 1
span length: 150.0';100.0'
total length: 255.0'
roadway wdt.: 15.5'

superstructure: wrought iron, 7-panel, pinned Pratt through truss; pin/rigid Pratt pony truss
substructure: steel pile bent and cylinder piers; timber pile bent abutments
floor/decking: timber deck over timber stringers (main span); plank over I-beam stringers
other features: MAIN SPAN: 2 channels with cover plate and batten plates; lower chord: punched eyebars; vertical: rods (hips); 2 channels with lacing bars; diagonal: punched eyebars; counters: rods; floor beam: queen post truss; sway: 2 pairs laced angles; portal: 2 pairs angles with lattice; lateral bracing: rods; guardrail: 2x6; builder's plate: **King Iron Bridge Co., Cleveland, O., 1887**
APPROACH SPAN: 2 channels with cover plate and batten plates; lower chord: forged eyebars; vertical: 2 pair angles with batten plates; diagonal: forged eyebars; counters: square rods; floor beam: I-beams; lateral bracing: rods; guardrail: 2 channels

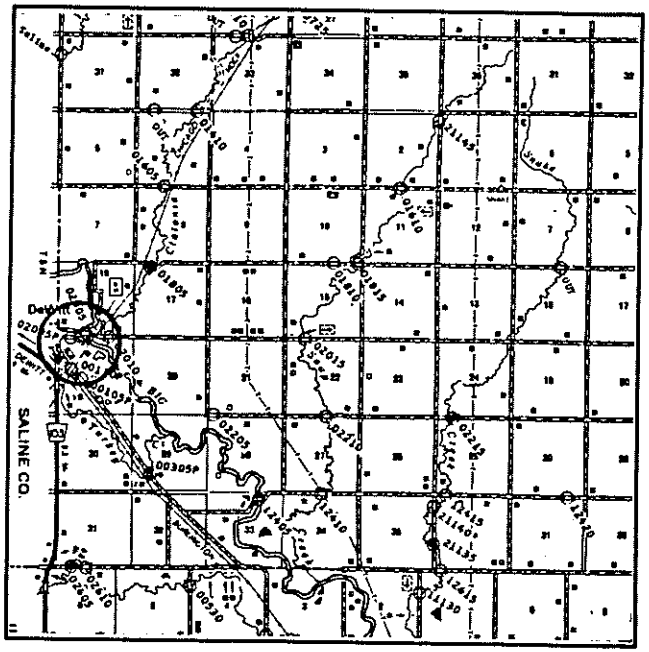
In July 1874 brothers Joseph and Frank Suiter began construction on a flour mill along the banks of the Big Blue River near DeWitt. Completed the following year, the mill was reportedly one of the largest in Nebraska. The Suiters operated the DeWitt Mill for two years before selling it in 1878. A year later it was destroyed by fire. The property then went through a succession of owners, and the mill itself was apparently rebuilt in 1886. A year later Gage County contracted with the King Iron Bridge Company of Cleveland for this single-span iron bridge to carry a county road over the river at the mill site. For the DeWitt crossing, King fabricated a standard 150-foot pinned Pratt through truss, supported by concrete-filled iron cylinder piers. The DeWitt Mill Bridge carried traffic unaltered until a 100-foot pinned Pratt pony was built onto the main truss's north approach. Featuring a standard design of the Nebraska state engineer, this latter span was built ca.1920. With the re-routing of the road over another bridge, the DeWitt Bridge is now closed to vehicular traffic.

About a dozen iron spans from the 1870s and 1880s have been identified in Nebraska by the statewide bridge inventory. Of these, all but the Cincinnati Bridge (**PAWN17**) and the DeWitt Mill Bridge have been moved at some later date. The oldest vehicular truss remaining in the state, it is an important transportation-related resource.

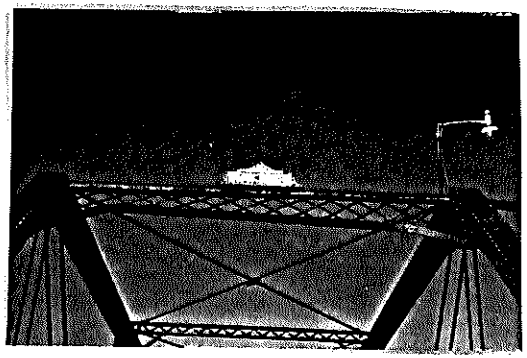
NAME(S) OF STRUCTURE

DeWitt Mill Bridge [Big Blue River Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES

Janet Jeffries and David Murphy, "DeWitt Flour Mills and King Iron Bridge," National Register Nomination, April 1977; field inspection by Fred Quivik, 6 March 1989.

INVENTORIED BY

Lon Johnson, Renewable Technologies, Inc.

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Hoyt Street Bridge [Blue Springs Bridge] GAGE40
NDOR: none

DATE(S) OF CONSTRUCTION
ca.1870; moved 1890

LOCATION
vacated township road over the Big Blue River; S29/32, T4N, R6E
western edge of Beatrice; Gage County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / abandoned bridge

RATING NRHP eligible (score: 66)

CONDITION
fair

OWNER
Gage County

span number: 1
span length: approx. 140'
total length: approx. 140'
roadway wdt.: approx. 14'

superstructure: wrought iron, 15-panel bowstring through arch-truss
substructure: tubular piers (east); I-beam piles (west)
floor/decking: removed
other features: upper chord: ovoid section tubular arch consisting of 2 half-ovoid sections riveted with a continuous plate sandwiched between them; lower chord: 2 iron straps; vertical: cruciform-shaped sections; diagonal: round rods; sway: 2 cruciform sections extending from floor, crossing near the upper chord, and bolted to opposite flanges of the tubular arch; struts: pipe with spacers and rod; floor beam: 2 channels; lateral bracing: rods; guardrail: removed

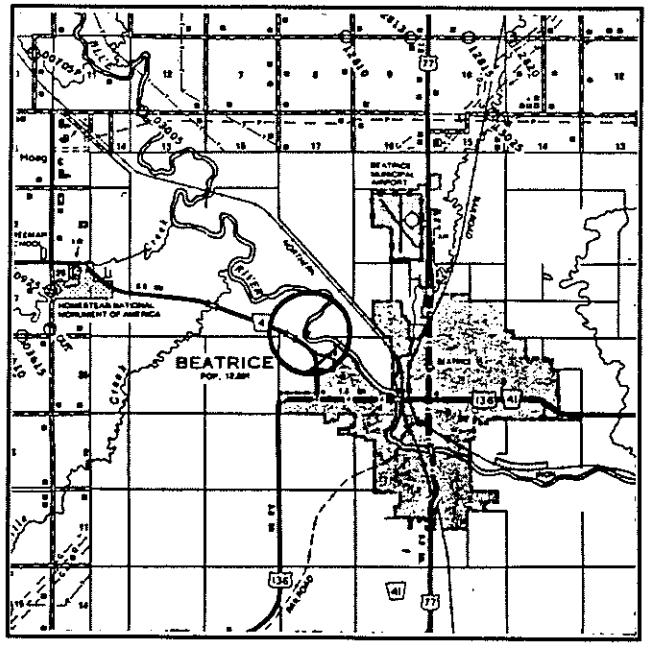
This bridge was originally constructed at Blue Springs and was known as the "Blue Springs Bridge." The date of construction and contractor are unknown. The bridge is first mentioned in Book 1 of the Gage County Supervisors' Records in October 1874 when a contract was awarded to paint the structure. In 1876, the supervisors ordered repairs to the bridge and authorized the contractor to seek an equal payment from the King Bridge Company, thus implying that the King Bridge Company originally built the structure. The tubular sections resemble the 1867 and 1872 patents issued to William Rezner of the Ohio Bridge Company. The bridge was moved to Hoyt Street near Beatrice in 1890.

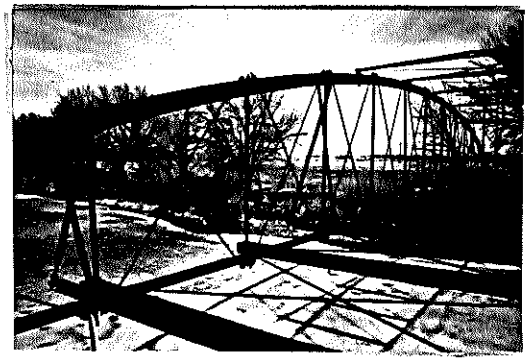
This bowstring through truss bridge is significant as an outstanding representative of an unusual structural type (one of six bowstring arch bridges identified in Nebraska). Thomas W.H. Moseley first patented a bowstring arch, and other companies, including the King Bridge Company and Renzer's Ohio Bridge Company, soon developed their own patented sections for the tubular arch section.

NAME(S) OF STRUCTURE

Hoyt Street Bridge [Blue Springs Bridge]

PHOTOS AND SKETCH MAP OF LOCATION





SOURCES

The Ohio Historic Bridge Inventory, Evaluation, and Preservation Plan (no place: Ohio Department of Transportation, 1983), pp. 38-39; Gage County Supervisor's Record, 6 October 1874, 7 February 1876; 15 July 1890, located at the Gage County Courthouse, Beatrice, Nebraska; field inspection by Fred Quivik, 4 March 1989.

INVENTORIED BY

Lon Johnson, Renewable Technologies, Inc.

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Lisco State Aid Bridge
NDOR: C003500105P

GARD01

DATE(S) OF CONSTRUCTION
1927-28

LOCATION
county road over the North Platte River; S33, T18N, R46W
0.6 mile south of Lisco; Garden County, Nebraska

USE (ORIGINAL / CURRENT)
highway bridge / roadway bridge

RATING potentially NRHP eligible (score: 58)

CONDITION
good

OWNER
Garden County

span number:	8	superstructure:	steel, 5-panel, rigid-connected Pratt pony truss
span length:	80.0'	substructure:	concrete abutments, wingwalls and piers on steel pilings
total length:	651.0'	floor/decking:	concrete deck over steel I-beam stringers
roadway wdt.:	15.0'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 channels with batten plates; vertical: 4 angles with continuous plate; diagonal: 2 angles with batten plates; lateral bracing: 1 angle; floor beam: I-beam, field bolted to vertical below lower chord; guardrail: 2 angles

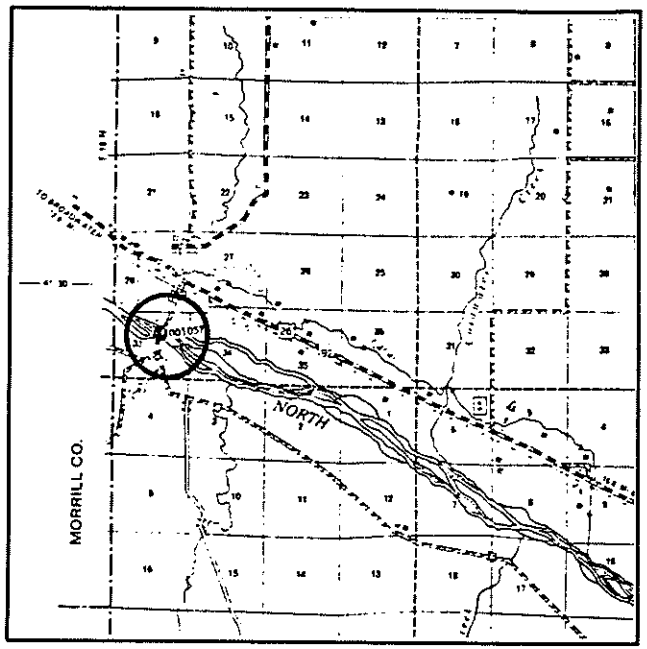
The Garden County Commissioners first applied for state aid to build bridges over the North Platte River at Lewellen and Oshkosh in July 1916. As they waited their turn on the state engineer's waiting list, they applied for state aid on a third span over the Platte at Lisco in April 1920. The Oshkosh Bridge, consisting of seven 100-foot riveted pony trusses, was erected in 1924-25; the Lewellen Bridge, identical to Oshkosh, in 1926-27. In 1927 engineers for the Department of Public Works designed an 8-span pony truss for the Lisco crossing in western Garden County. Unlike the two other structures, the spans at Lisco were 80 feet long, but it was otherwise like its two predecessors in its use of standard-design riveted Pratt pony trusses. On October 26, 1927, a contract for the construction of the Lisco Bridge was awarded to the Western Bridge and Construction Company for $47,600. Filling the bridge's approaches, surfacing, and protection work cost an additional $17,150.00. Using steel fabricated by the Inland Steel Corporation, Western completed the structure during the relatively mild winter of 1927-28. Although originally a primary system crossing, the Lisco Bridge is now maintained by the county in essentially unaltered condition.

The Nebraska state engineer's office designed eight state aid bridges using multiple-span riveted Pratt pony trusses. With spans ranging from 60 to 100 feet, most were built in the mid-1920s, when the riveted long-span pony truss found its greatest acceptance in Nebraska. Of the three Garden County state aid bridges, two remain in original condition. In fact, the Lisco and Lewellen bridges are the only remaining intact examples of state aid pony trusses in Nebraska. (A third structure, the Platte River Bridge (**HALL01**) in Hall County, is made up of six spans salvaged from the Silver Creek State Aid Bridge.) The Lisco Bridge is historically significant as a regionally important crossing of the North Platte River and as one of the last remaining intact structures from the state aid program.

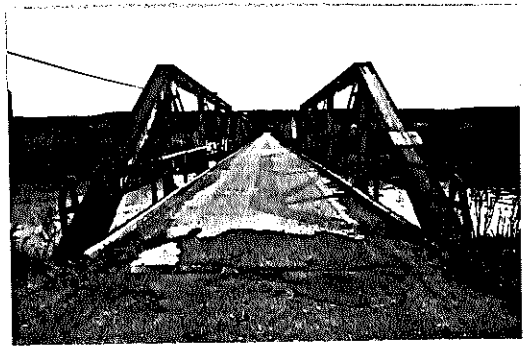
NAME(S) OF STRUCTURE

Lisco State Aid Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003500105P; Department of Public Works, **Fourteenth Biennial Report**, 1921-1922, page 273; Department of Public Works, **Sixteenth Biennial Report**, 1925-26, page 225; Department of Public Works, **Seventeenth Biennial Report**, 1927-1928, pp. 46, 83, 85-86, 101; Aivars G. Ronis, "Nebraska State Aid Bridges," typewritten report by Nebraska Department of Roads, 1971, revised 1978, n.p.; field inspection by Clayton Fraser, 2 May 1989.

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Lewellen State Aid Bridge
NDOR: C003505305P

GARD02

DATE(S) OF CONSTRUCTION
1926-1927

LOCATION
county road over the North Platte River; S33, T16N, R42W
1.0 mile south of Lewellen; Garden County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 58)

CONDITION
good

OWNER
Nebraska Department of Roads

span number:	7	superstructure:	steel, 5-panel, rigid-connected Pratt pony truss
span length:	100.0'	substructure:	concrete abutments, wingwalls and piers on steel pilings encased in concrete??
total length:	710.0'	floor/decking:	concrete deck over steel I-beam stringers
roadway wdt.:	15.0'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 channels with batten plates; vertical: 4 angles with continuous plate; diagonal: 2 angles with batten plates; lateral bracing: round bar; floor beam: I-beam bolted to vertical; guardrail: 2 continuous angles

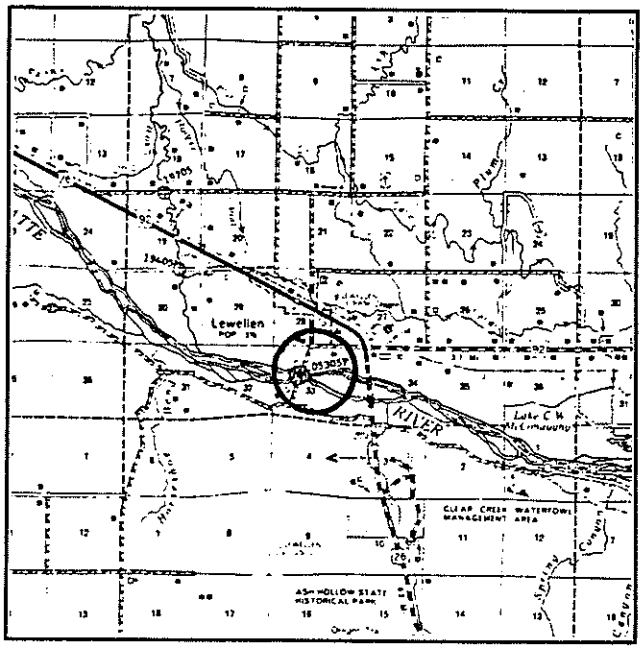
The Garden County Commissioners first applied for state aid to build bridges over the North Platte River at Lewellen and Oshkosh in July 1916. The Oshkosh Bridge, comprised of seven 100-foot riveted pony trusses, was erected in 1924-25. Early in 1926 engineers for the Department of Public Works designed a structure for the Lewellen crossing in southeastern Garden County. Like the Oshkosh Bridge, the Lewellen design was made up of seven 100-foot riveted Pratt ponies. These were supported by 50-foot long, 8-inch Bethlehem H-piles, encased in concrete. On April 9, 1926, the county commissioners received proposals for the project from six firms. The bids ranged from a high of $80,400.00 to the $71,300.00, bid of the Western Bridge and Construction Company of Omaha, which was awarded the contract. Western built the structure during the fall and winter of 1926-1927. Although originally a primary system crossing, the Lewellen Bridge is now maintained by the county in essentially unchanged condition.

The Nebraska state engineer's office designed eight state aid bridges using multiple-span riveted Pratt pony trusses. With spans ranging from 60 to 100 feet, most were built in the mid-1920s, when the riveted long-span pony truss found its greatest acceptance in Nebraska. Of the three Garden County state aid bridges, two remain in original condition. In fact, the Lewellen and Lisco bridges are the only remaining intact examples of state aid pony trusses in Nebraska. (A third structure, the Platte River Bridge (**HALL01**) in Hall County, is made up of six spans salvaged from the Silver Creek State Aid Bridge.) The Lewellen Bridge is historically significant as a regionally important crossing of the North Platte River and as one of the last remaining intact structures from the state aid program.

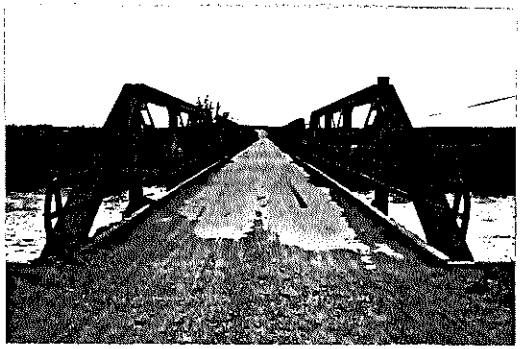
NAME(S) OF STRUCTURE

Lewellen State Aid Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS GENERAL HIGHWAY MAP



SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003505305P; Department of Public Works, **Fourteenth Biennial Report**, 1921-1922, page 273; Department of Public Works, **Sixteenth Biennial Report**, 1925-26, page 228; Aivars G. Ronis, "Nebraska State Aid Bridges," typewritten report by Nebraska Department of Roads, 1971, revised 1978, n.p.;field inspection by Clayton Fraser, 2 May 1989.

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
North Platte River Bridge
NDOR: S026 11926

GARD03

DATE(S) OF CONSTRUCTION
1939-1940

LOCATION
State Highway 26 over the North Platte River; S34, T16N, R42W
1.6 miles southeast of Lewellen; Garden County, Nebraska

USE (ORIGINAL / CURRENT)
highway bridge / highway bridge

RATING NRHP non-eligible (score: 30)

CONDITION
excellent

OWNER
Nebraska Department of Roads

span number:	9	superstructure:	steel cantilevered stringer
span length:	50.0'	substructure:	concrete abutments, wingwalls with steel pile bent piers
total length:	451.0'	floor/decking:	asphalt over concrete deck
roadway wdt.:	39.8'	other features:	guardrail: Armco

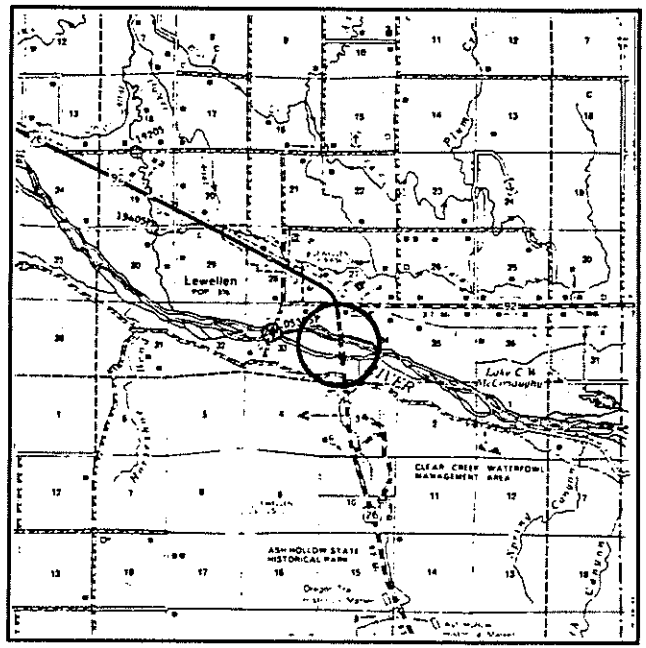
In May 1939 Nebraska's Department of Roads and Irrigation designed two steel stringer bridges to span two channels of the North Platte River in southeastern Garden County. Six months later, on November 23, 1939, a contract to erect the two bridges was let to the Colorado Bridge and Construction Company of Denver. Using steel fabricated at Bethlehem Steel's Chicago plant, Colorado Bridge completed both structures during the mild winter of 1939-1940. Located over the northern channel, the longer of the two bridges (S026 11926) was built as a nine-span cantilevered steel stringer, with an overall length of 451 feet. Less than a half mile to the south, the shorter of the two bridges (GARD04) was built as a seven-span cantilevered steel stringer with an overall length of 351 feet. The overall cost of the project was $89,411.64, including gravel work and approach grading. The original roadway width of both structures was 24 feet, but in 1973 they were increased to an overall width of 40 feet. New steel used in the widening was fabricated by the Tri State Steel Company of Cheyenne, Wyoming, and the project was completed by the Missouri Valley Construction Company. Today, both bridges continue to carry vehicular traffic across the North Platte River.

The state engineer's office experimented with cantilevered stringer construction throughout the 1930s, ultimately achieving spans in excess of 130 feet. These two structures over the North Platte River in Garden Country represent typical examples in this construction program and are historically and technologically undistinguished.

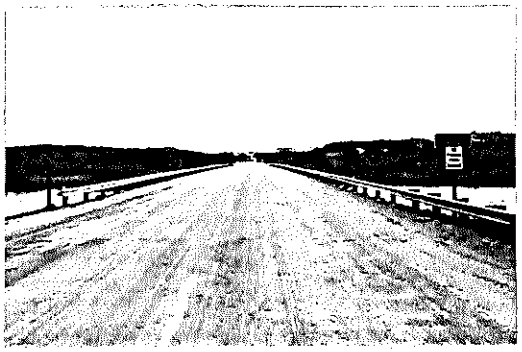
NAME(S) OF STRUCTURE

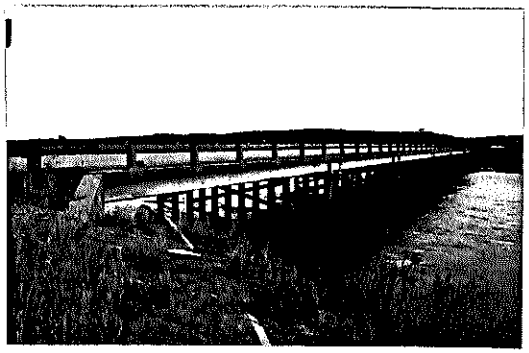
North Platte River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number S026 11926; State of Nebraska, Department of Roads and Irrigation, Bureau of Roads and Bridges, Special Design for 1-450' and 1-350' Multiple Span Deck Steel Girder Bridges, Garden County Project 249 C (3), 9 May 1939; Department of Roads and Irrigation, **Twenty-third Biennial Report**, 1939-1940, pp. 38-41, 134; field inspection by Clayton Fraser, 2 May 1989.

INVENTORIED BY

Clayton B. Fraser

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Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
North Platte River Bridge
NDOR: S026 11954

GARD04

DATE(S) OF CONSTRUCTION
1939-1940

LOCATION
State Highway 26 over the North Platte River; S34, T16N, R42W
1.9 miles southeast of Lewellen; Garden County, Nebraska

USE (ORIGINAL / CURRENT)
highway bridge / highway bridge

RATING NRHP non-eligible (score: 30)

CONDITION
excellent

OWNER
Nebraska Department of Roads

span number:	7	superstructure:	steel cantilevered stringer
span length:	50.0'	substructure:	concrete abutments, wingwalls with steel pile bent piers
total length:	351.0'	floor/decking:	asphalt over concrete deck
roadway wdt.:	40.0'	other features:	guardrail: Armco

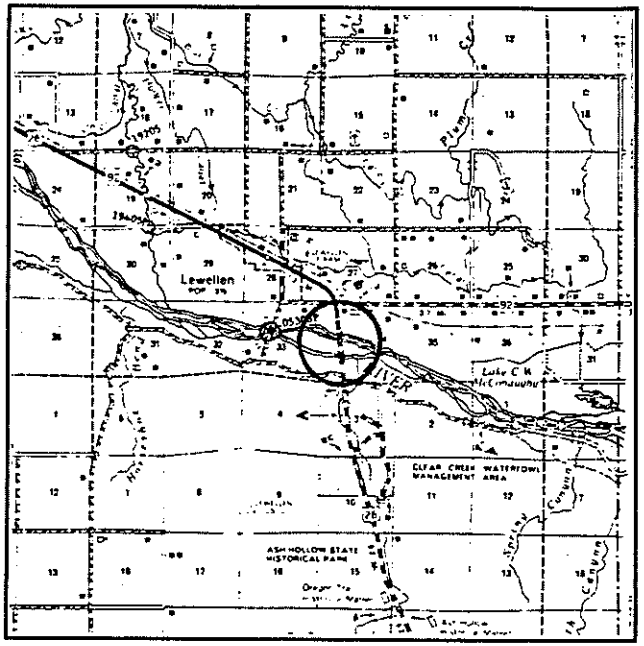
In May 1939 Nebraska's Department of Roads and Irrigation designed two steel stringer bridges to span two channels of the North Platte River in southeastern Garden County. Six months later, on November 23, 1939, a contract to erect the two bridges was let to the Colorado Bridge and Construction Company of Denver. Using steel fabricated at Bethlehem Steel's Chicago plant, Colorado Bridge completed both structures during the mild winter of 1939-1940. Located over the northern channel, the longer of the two bridges (GARD03) was built as a nine-span cantilevered steel stringer, with an overall length of 451 feet. Less than a half mile to the south, the shorter of the two bridges (S026 11954) was built as a seven-span cantilevered steel stringer with an overall length of 351 feet. The overall cost of the project was $89,411.64, including gravel work and approach grading. The original roadway width of both structures was 24 feet, but in 1973 they were increased to an overall width of 40 feet. New steel used in the widening was fabricated by the Tri State Steel Company of Cheyenne, Wyoming, and the project was completed by the Missouri Valley Construction Company. Today, both bridges continue to carry vehicular traffic across the North Platte River.

The state engineer's office experimented with cantilevered stringer construction throughout the 1930s, ultimately achieving spans in excess of 130 feet. These two structures over the North Platte River in Garden Country represent typical examples in this construction program and are historically and technologically undistinguished.

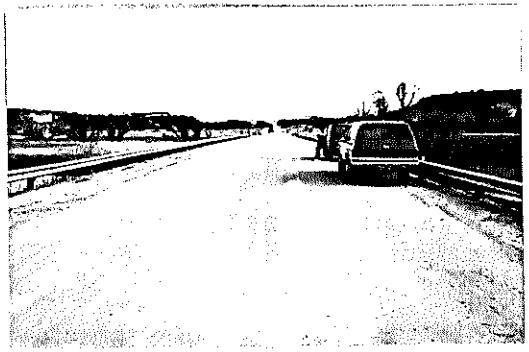
NAME(S) OF STRUCTURE

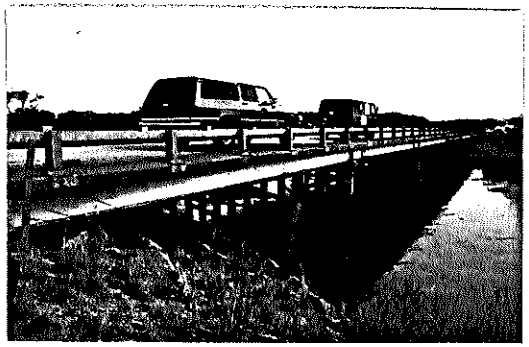
North Platte River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number S026 11926; State of Nebraska, Department of Roads and Irrigation, Bureau of Roads and Bridges, Special Design for 1-450' and 1-350' Multiple Span Deck Steel Girder Bridges, Garden County Project 249 C (3), 9 May 1939; Department of Roads and Irrigation, **Twenty-third Biennial Report**, 1939-1940, pp. 38-41, 134; field inspection by Clayton Fraser, 2 May 1989.

INVENTORIED BY

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DATE

15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Burwell Bridge [North Loup River Bridge] GARF01
NDOR: S011 09274

DATE(S) OF CONSTRUCTION
1940-1941

LOCATION
State Highway 11 over the North Loup River; S13/14, T21N, R16W
north edge of Burwell; Garfield County, Nebraska

USE (ORIGINAL / CURRENT)
highway bridge / highway bridge

RATING potentially NRHP eligible (score: 40)

CONDITION
excellent

OWNER
Nebraska Department of Roads

span number:	3	superstructure:	steel cantilever stringer, skewed
span length:	110.0'	substructure:	concrete abutments, wingwalls and spill-through piers
total length:	290.0'	floor/decking:	concrete deck over steel stringers
roadway wdt.:	24.0'	other features:	guardrail: steel, with concrete curbing

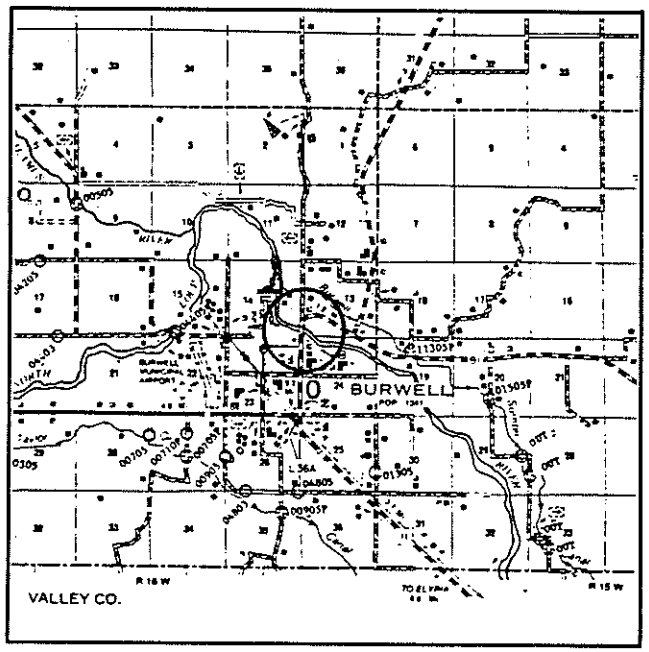
On June 25, 1939, floodwaters washed out the existing Highway 11 bridge over the North Loup River on the northern edge of Burwell. No effort was made to replace the structure until the following winter, when in March 1940 engineers for the Nebraska Department of Roads and Irrigation designed a new steel bridge. The bureau let the project out for competitive bid under Project No. 322-E(1) and in June awarded the construction contract to the W.A. Biba Engineering Company of Geneva, Nebraska. The structure consisted of three steel stringer spans, supported by concrete abutments and piers. With a 30 degree skew, the Burwell Bridge featured a 73-foot span in the center suspended by cantilevered arms from the outside spans, for a maximum span of 109 feet. The structure was massive, consuming some 365,430 pounds of superstructural steel and costing $44,763.28, including grading and gravel work on the approaches. Biba obtained steel from the Omaha Steel Works, and completed work on the 290-foot structure early in 1941. Since its completion, the bridge has carried vehicular traffic on Highway 11 - Garfield County's principal north-south artery - in essentially unaltered condition.

Five feet shorter than the Cairo Bridge (**HOWA05**) in Howard County, the Burwell Bridge represents one of the longest cantilevered beam structures identified in the statewide bridge inventory. It represents an extension of the long-span beam bridge experimentation conducted by the state engineer's office in the 1930s.

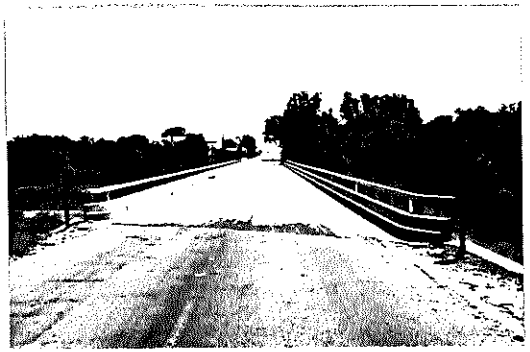
NAME(S) OF STRUCTURE

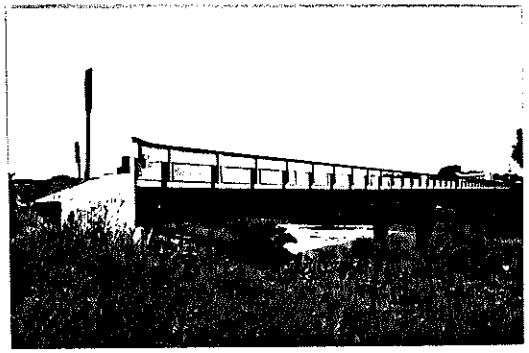
Burwell Bridge [North Loup River Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number S011 09274; Special Design for 1-109' and 2-90'6" Cantilevered Spans, Deck Steel Girders, Garfield County Project 322-E (1) 17, March 1940; **Twenty-third Biennial Report of the Department of Roads and Irrigation**, Part I, 1939-1940, pp. 49, 50, 52, 151; field inspection by Clayton Fraser, 7 July 1989.

INVENTORIED BY

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DATE

15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Muddy Creek Bridge
NDOR: C003701305

GOSP01

DATE(S) OF CONSTRUCTION
1916

LOCATION
county road over Muddy Creek ; S24, T5N, R24W
16.0 miles southwest of Elwood; Gosper County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 38)

CONDITION
good

OWNER
Gosper County

span number: 1
span length: 85.0'
total length: 110.0'
roadway wdt.: 15.8'

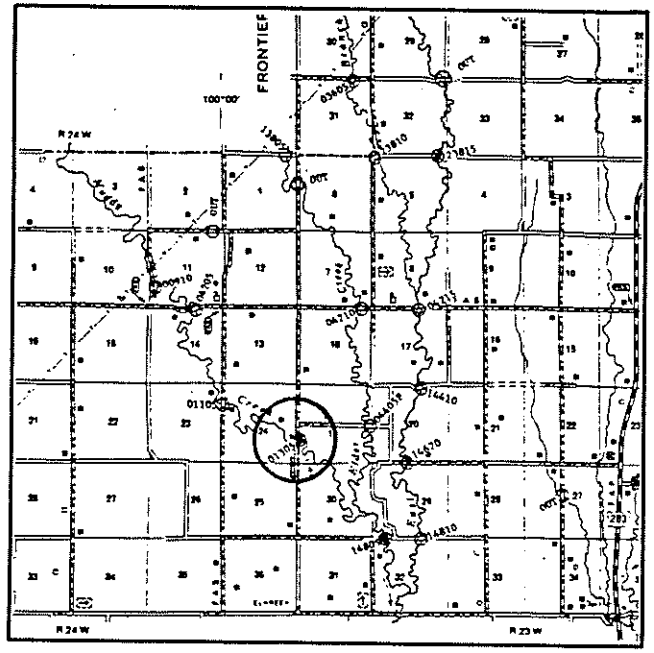
superstructure: steel, 5-panel, pin-connected Pratt pony truss
substructure: steel pile bent abutments with timber wingwalls
floor/decking: earth-covered timber deck over timber stringers
other features: upper chord: 2 channels with cover plates and lacing; lower chord: 2 punched rectangular eyebars; vertical: 4 angles with batten plates; diagonal: 2 punched rectangular eyebars; lateral bracing: round bar; floor beam: I-beam field bolted to vertical; guardrail: 2 channels; endpost-mounted bridge plates; **Capacity 15 Ton Engine; 1916 THE MIDLAND BRIDGE CO. FREYGANG TROCON PROPRIETORS KANSAS CITY MO.**

In February 1916 the Gosper County Commissioners received unit-price bids for its annual bridge construction contract from the Elkhart Bridge and Iron Company, Elkhart IN; Midland Bridge Company, Kansas City MO; C.C. May; Omaha Structural Steel Works; Western Bridge and Construction Company, Omaha; and the Illinois Steel Bridge Company, Jacksonville IL. The commissioners awarded the contract to Illinois Steel, but the following month declared an emergency due to the large number of bridge washouts the previous summer and ordered an 85-foot and a 90-foot pony truss - both designed by the state highway department - from Midland. The 85-foot span was to span Muddy Creek in the rural southwest corner of the county. Comprised of steel rolled by the Carnegie Steel Company of Pittsburgh, the Muddy Creek Bridge was completed later that year. It has carried relatively light traffic since, in unaltered condition.

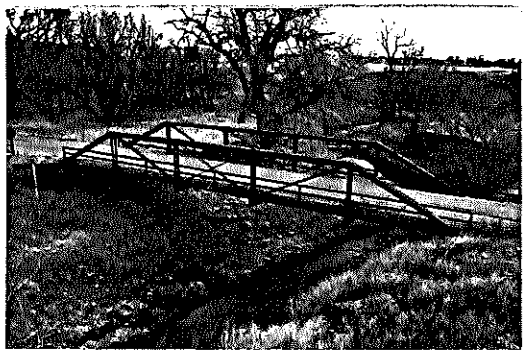
Like most of Nebraska's counties, Gosper County awarded annual bridge contracts throughout the 1910s. Unlike many of the others, however, the Gosper County Commissioners did not award successive contracts to a single bridge company, but instead staged truly competitive bidding each year. As a result, no less than five bridge companies received annual contracts between 1910 and 1920. The circumstances behind the construction of the Muddy Creek Bridge in 1916 illustrates this process. The pinned Pratt pony truss erected by Midland is a typically configured example of an exceedingly common structural type.

NAME(S) OF STRUCTURE
Muddy Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003701305; Proceedings of the Gosper County Commissioners, 1909-1920, for specific references to this bridge, see Book 4: 11 January 1916 (page 516), 15 February 1916 (page 526-27), 14 March 1916 (page 531), located at Gosper County Courthouse, Elwood, Nebraska; field inspection by Clayton Fraser, 30 March 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C003702505

GOSP02

DATE(S) OF CONSTRUCTION
1916

LOCATION
county road over unnamed stream; S25, T6N, R23W
9.7 miles south of Elwood; Gosper County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 31)

CONDITION
good

OWNER
Gosper County

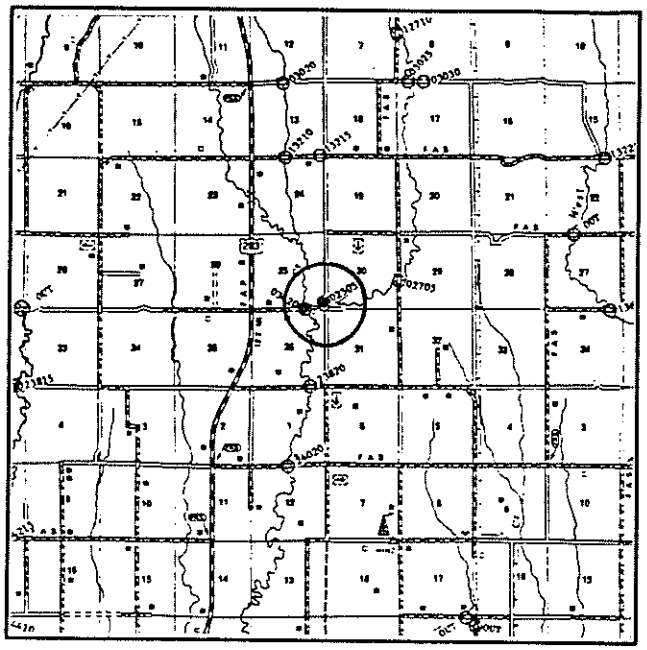
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt pony truss
span length:	55.0'	substructure:	steel pile bent abutments with timber wingwalls
total length:	56.0'	floor/decking:	earth covered timber over timber stringers
roadway wdt.:	16.0'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 punched rectangular eyebars; vertical: 4 angles with batten plates; diagonal: 1 punched rectangular eyebar with turnbuckle; lateral bracing: round bar with threaded ends; floor beam: I-beam field bolted to vertical; guardrail: 2 channels

In February 1916 the Gosper County Commissioners received unit-price bids for its annual bridge construction contract from the Elkhart Bridge and Iron Company, Elkhart IN; Midland Bridge Company, Kansas City MO; C.C. May; Omaha Structural Steel Works; Western Bridge and Construction Company, Omaha; and the Illinois Steel Bridge Company, Jacksonville IL. The commissioners awarded the contract to Illinois Steel, and in April ordered this highway department standard, 55-foot pinned pony truss to span a small stream south of Elwood. Completed later that year, the bridge has carried vehicular traffic since, in essentially unaltered condition.

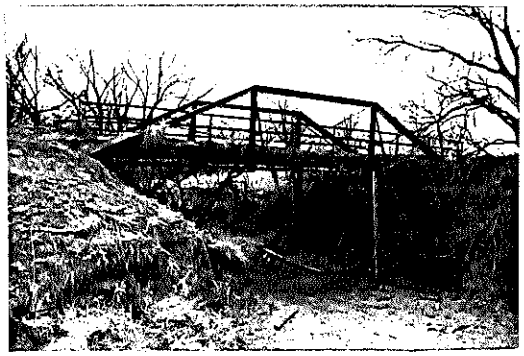
This structure typifies short-span truss construction in Nebraska in the 1910s. Based on a highway department standard and built by a regionally prominent bridge erector during a time of intense bridge construction activity, it fits well within the mainstream of technological trends for the period. Although physically intact, the bridge lacks any major historical significance in its present location.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003702505; Proceedings of the Gosper County Commissioners, Book 4: 11 January 1916 (page 516), 15 February 1916 (pages 526-27), 3 April 1916 (page 532), located at Gosper County Courthouse, Elwood, Nebraska; field inspection by Clayton Fraser, 30 March 1990.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
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DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Elk Creek Bridge
NDOR: C003703620

GOSP03

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
county road over Elk Creek; S25/36, T6N, R23W
9.8 miles south of Elwood; Gosper County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 22)

CONDITION
fair

OWNER
Gosper County

span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt pony truss
span length:	60.0'	substructure:	steel pile bent abutments with timber wingwalls
total length:	61.0'	floor/decking:	earth covered timber deck over timber stringers
roadway wdt.:	15.8'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 punched rectangular eyebars; vertical: 2 angles with batten plates; diagonal: 2 punched rectangular eyebars; lateral bracing: round bar with threaded ends; floor beam: I-beam, field bolted to vertical; guardrail: 2 angles; gusset plates at hip connections

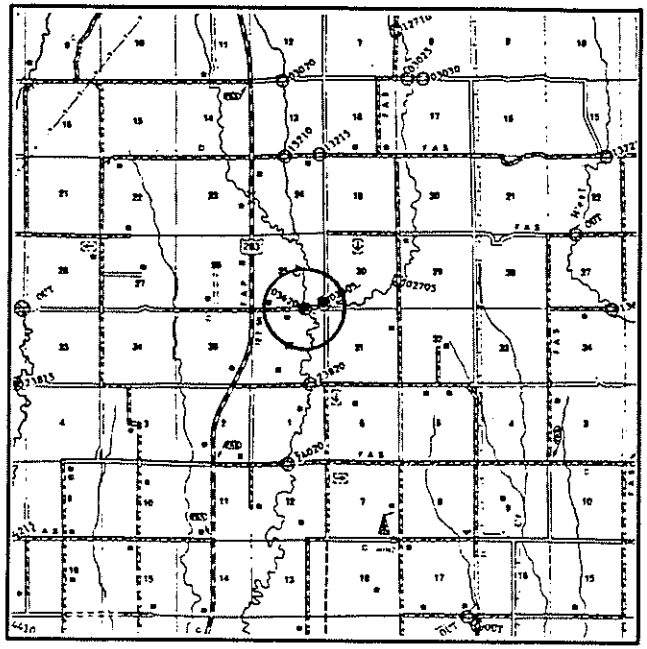
Fabricated ca.1915 from a standard plan of the state highway department, this small-scale pony truss carries an unpaved section-line road over Elk Creek near the center of Gosper County. The structure appears unaltered and retains a high degree of physical integrity.

The Elk Creek Bridge is a typical example of a common structural type in Nebraska, built in the 1910s from standardized designs developed by the state highway department.

NAME(S) OF STRUCTURE

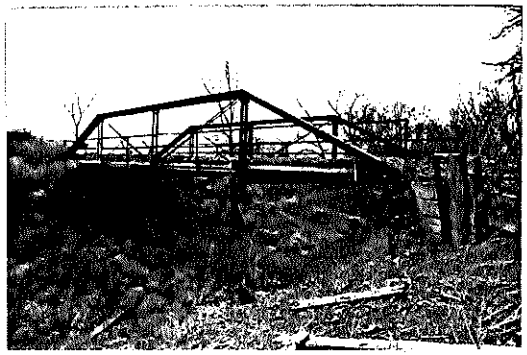
Elk Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP

TAKEN FROM NEBRASKA DEPARTMENT OF ROADS GENERAL HIGHWAY MAP



SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003703620; field inspection by Clayton Fraser, 7 August 1990.

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Elk Creek Bridge
NDOR: C003704605P

GOSP04

DATE(S) OF CONSTRUCTION
1915

LOCATION
county road over Elk Creek; S26, T5N, R23W
15.0 miles southwest of Elwood; Gosper County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 29)

CONDITION
good

OWNER
Gosper County

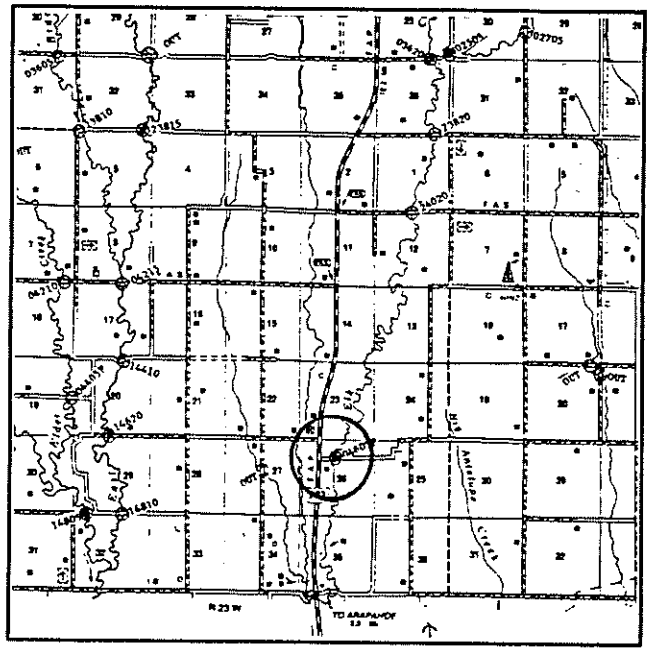
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt pony truss
span length:	40.0'	substructure:	steel pile bent abutments with timber wingwalls
total length:	56.0'	floor/decking:	earth covered timber over timber stringers
roadway wdt.:	15.8'	other features:	upper chord: 2 channels with cover plates and lacing; lower chord: 2 punched rectangular eyebars; vertical: 4 angles with batten plates; diagonal: 1 punched rectangular eyebar with turnbuckle; lateral bracing: round bar with threaded ends; floor beam: I-beam, field bolted to vertical; guardrail: steel pipe

In the wake of extensive late spring flooding in 1915, between forty and fifty Gosper County bridges were washed out or severely damaged. The commissioners toured the county in June to survey the damage, set aside all pending bridge petitions from the local citizenry and ordered ten new spans from the Midland Bridge Company. (The Kansas City-based firm had been awarded that year's annual bridge construction contract in February.) Midland fabricated the steel structures using state highway department standards and completed the emergency work later that year. Among the spans built in 1915 was this small span over Elk Creek, 15 miles southwest of Elwood, the county seat. The Elk Creek Bridge consists of a single 40-foot, pinned Pratt pony truss, supported by steel pile bent abutments. Since its completion, it has carried vehicular traffic, with only minor maintenance-related work.

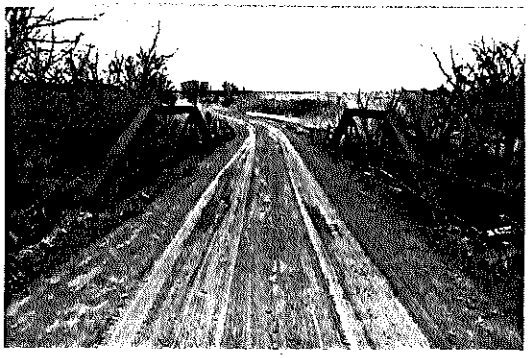
Built as part of an extensive construction effort in 1915, this short-span pony truss is a typical example of a standard-design bridge construction in Nebraska.

NAME(S) OF STRUCTURE
Elk Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003704605P; Proceedings of the Gosper County Commissioners, Book 4: 22 February 1922 (page 462), 25 June 1915 (page 475), 5 July 1915 (page 483), 1 November 1915 (page 502), located at Gosper County Courthouse, Elwood, Nebraska; field inspection by Clayton Fraser, 30 March 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Muddy Creek Bridge
NDOR: C003714620

GOSP05

DATE(S) OF CONSTRUCTION
1916

LOCATION
county road over East Branch of Muddy Creek; S20/29, T5N, R23W
15.6 miles southwest of Elwood; Gosper County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 31)

CONDITION
fair

OWNER
Gosper County

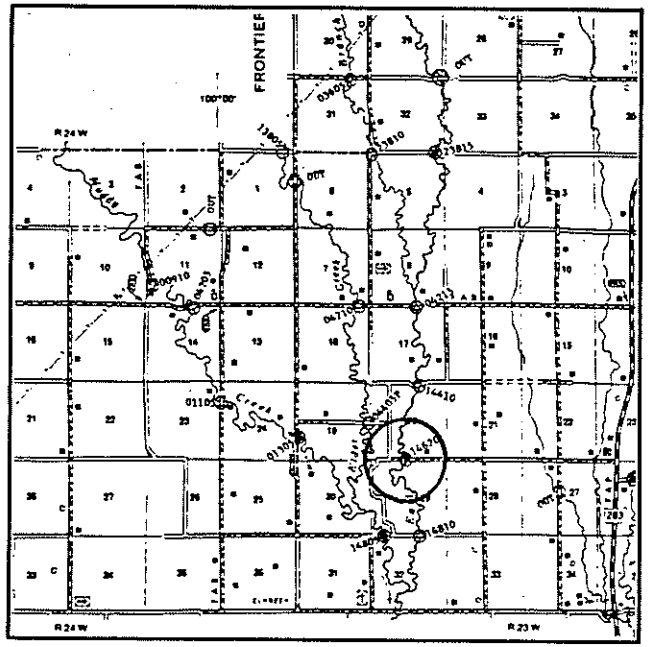
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt pony truss
span length:	40.0'	substructure:	steel pile bent abutments with timber wingwalls
total length:	42.0'	floor/decking:	earth covered timber deck over timber stringers
roadway wdt.:	15.8'	other features:	upper chord: 2 channels with cover plates and lacing; lower chord: 2 punched rectangular eyebars; vertical: 4 angles with batten plates; diagonal: round eyebars; lateral bracing: round eyebar with turnbuckle; floor beam: I-beam, field bolted to vertical; guardrail: 2 channels

In March 1916 the Gosper County Commissioners received competitive unit-price proposals for an annual bridge construction contract from several bridge companies. They awarded the contract to the Illinois Steel Bridge Company of Jacksonville IL, which had received the annual contract the preceding year, and a month later ordered this 40-foot pinned pony truss to carry a section-line road over a small branch of Muddy Creek. Using a standard design by the state highway department and steel components rolled by the Illinois Steel Company of Chicago, the firm completed this structure later that year. It has carried traffic since, in essentially unaltered condition.

One of many similar Pratt pony trusses built from standard designs throughout Nebraska, this bridge exhibits typical structural and design attributes. It is technologically and historically unremarkable.

NAME(S) OF STRUCTURE
Muddy Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003714620; Proceedings of the Gosper County Commissioners, Book 4: 15 January 1914 (page 398), 17 February 1914 (page 401), 24 March 1914 (page 403), 278 April 1914 (page 409), 20 August 1914 (page 434), located at Gosper County Courthouse, Elwood, Nebraska; field inspection by Clayton Fraser, 30 March 1990.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Muddy Creek Bridge
NDOR: C003714805

GOSP06

DATE(S) OF CONSTRUCTION
1916

LOCATION
county road over Muddy Creek; S29/32, T5N, R23W
16.7 miles southwest of Elwood; Gosper County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 38)

CONDITION
good

OWNER
Gosper County

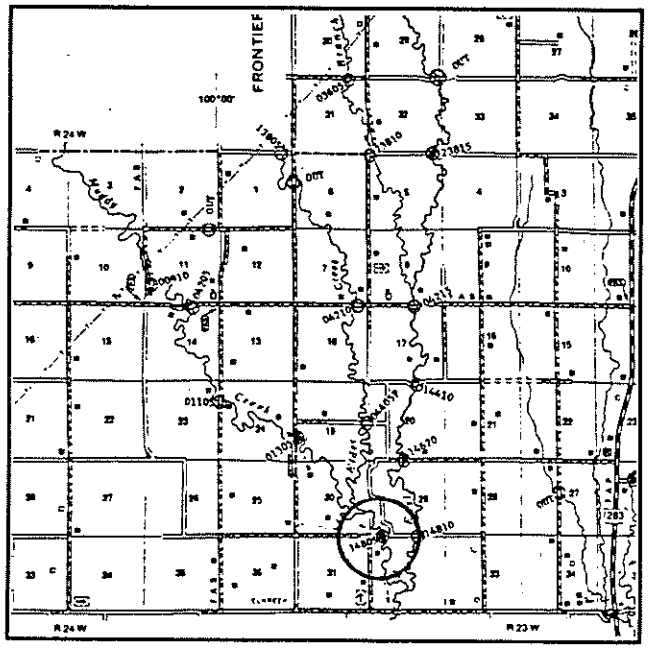
span number:	1	superstructure:	steel, 5-panel, pin-connected Pratt pony truss
span length:	90.0'	substructure:	steel pile bent abutments with timber wingwalls
total length:	82.0'	floor/decking:	earth covered timber hollywood deck over timber stringers
roadway wdt.:	15.8'	other features:	upper chord: 2 channels with cover plates and lacing; lower chord: 2 punched rectangular eyebars; vertical: 4 angles with batten plates; diagonal: 2 punched rectangular eyebars; counter: 2 square eyebars with turnbuckles; lateral bracing: round bar with threaded ends; floor beam: I-beam, field bolted to vertical; guardrail: 2 channels; endpost-mounted bridge plates: **Capacity 15 Ton Engine**; builder's plate: **1916 THE MIDLAND BRIDGE CO. FREYGANG TROCON PROPRIETORS KANSAS CITY MO.**

In February 1916 the Gosper County Commissioners received unit-price bids for its annual bridge construction contract from the Elkhart Bridge and Iron Company, Elkhart IN; Midland Bridge Company, Kansas City MO; C.C. May; Omaha Structural Steel Works; Western Bridge and Construction Company, Omaha; and the Illinois Steel Bridge Company, Jacksonville IL. The commissioners awarded the contract to Illinois Steel, but the following month declared an emergency due to the large number of bridge washouts the previous summer and ordered an 85-foot and a 90-foot pony truss - both designed by the state highway department - from Midland. The 90-foot span was to span Muddy Creek in the rural southwest corner of the county. Comprised of steel rolled by the Carnegie Steel Company of Pittsburgh, the Muddy Creek Bridge was completed later that year. It has carried relatively light traffic since, in unaltered condition.

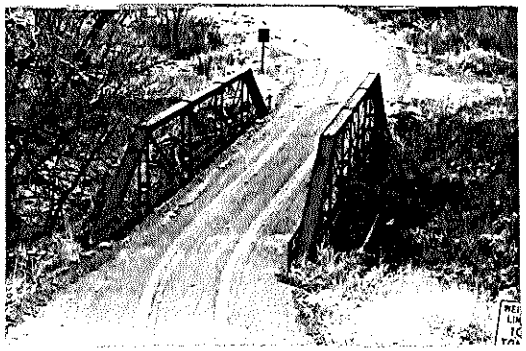
Like most of Nebraska's counties, Gosper County awarded annual bridge contracts throughout the 1910s. Unlike many of the others, however, Gosper County did not award successive contracts to a single bridge company, but instead staged truly competitive bidding each year. As a result, no less than five bridge companies received annual contracts between 1910 and 1920. The circumstances behind the construction of the Muddy Creek Bridge in 1916 illustrates this process. The pinned Pratt pony truss erected by Midland is a typically configured example of an exceedingly common structural type.

NAME(S) OF STRUCTURE
Muddy Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003714805; Proceedings of the Gosper County Commissioners, 1909-1920, for specific references to this bridge, see Book 4: 11 January 1916 (page 516), 15 February 1916 (page 526-27), 14 March 1916 (page 531), located at Gosper County Courthouse, Elwood, Nebraska; field inspection by Clayton Fraser, 30 March 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C003723815

GOSP07

DATE(S) OF CONSTRUCTION
1911

LOCATION
county road over unnamed stream; S32, T6N, R23W
11.6 miles southwest of Elwood; Gosper County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 31)

CONDITION
fair

OWNER
Gosper County

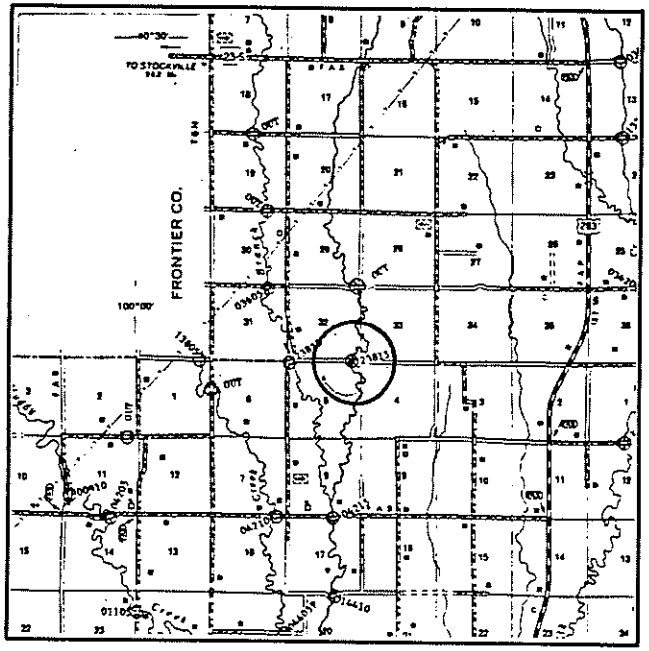
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt pony truss
span length:	40.0'	substructure:	steel pile bent abutments and timber wingwalls (corrugated steel added at backwalls)
total length:	40.0'	floor/decking:	earth-covered timber deck over timber stringers
roadway wdt.:	15.7'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 punched rectangular eyebars; vertical: 4 angles with batten plates; diagonal: looped square eyebars; lateral bracing: round bar with threaded ends; floor beam: I-beam, field bolted to vertical; guardrail: 2 angles; endpost-mounted builder's plate: **OMAHA STRUCTURAL STEEL WORKS 1911**

In November 1910 the Gosper County Commissioners instructed the county clerk to advertise for competitive unit-price bids on the county's annual contract for 1911. When proposals were received from four bridge companies the following January, the commissioners first awarded the contract to the Standard Bridge Company of Omaha, then re-examined Standard's proposal and rejected it. They did retain Standards plans and specifications for trusses, however, when they re-bid the contract later that month. In February the contract was awarded to local contractor C.C. May. Later that year, May built this short pony truss southwest of Elwood, in the sparsely populated southwest corner of the county. The bridge consisted of a single pinned Pratt pony truss, fabricated using a Standard Bridge Company design by the Omaha Structural Steel Works, using steel rolled by Inland. The bridge has carried traffic since its completion in unaltered condition.

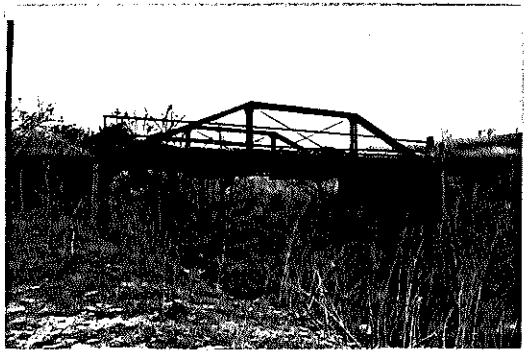
This small-scale bridge enjoys a modicum of significance as the county's oldest remaining vehicular bridge but is otherwise technologically and historically unremarkable.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C003723815; Proceedings of the Gosper County Commissioners, Book 4: 15 November 1910 (page 193), 10 January 1911 (pages 203, 205), 23 January 1911 (page 209), 20 February 1911 (page 211), located at Gosper County Courthouse, Elwood, Nebraska; field inspection by Clayton Fraser, 30 March 1990.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Tri-County Supply Canal Bridge GOSP08
NDOR: S283 05035

DATE(S) OF CONSTRUCTION
1938

LOCATION
U.S. Highway 283 over Tri-County Supply Canal; S2/3, T8N, R22W
8.0 miles north of Elwood; Gosper County, Nebraska

USE (ORIGINAL / CURRENT)
highway bridge / highway bridge

RATING NRHP non-eligible (score: 27)

CONDITION
excellent

OWNER
Nebraska Department of Roads

span number:	3	superstructure:	steel cantilever stringer
span length:	95.0'	substructure:	concrete abutments and spill-through piers with steel piling
total length:	254.0'	floor/decking:	concrete deck over steel stringers
roadway wdt.:	24.1'	other features:	concrete curb and steel guardrail

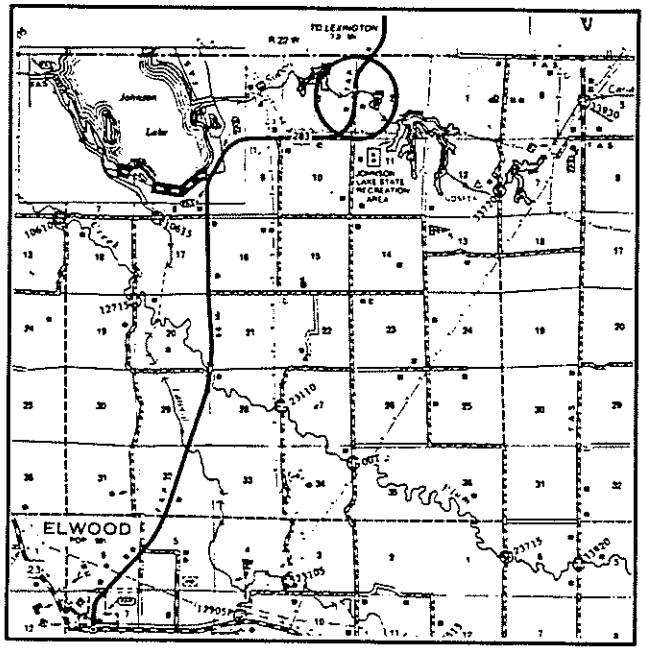
Situated eight miles north of the county seat, Elwood, this steel bridge carries U.S. Highway 283 over the Tri-County Supply Canal in northern Gosper County. The bridge was designed by the Public Works Association in October 1937 and let for bid under Project No. PWA D-3400. Completed in 1938, the bridge consists of a center 95-foot steel stringer span, flanked on both sides by 77-foot spans. The beams from each of the flanking spans extend into the center span 14-1/2 feet, forming cantilevered arms from which a 66-foot span is suspended. The superstructure is carried high above the canal by concrete spill-through piers. Since its completion, the Tri-County Supply Canal Bridge has carried traffic on this minor U.S. Highway in essentially unaltered condition.

Although its center span is longer than average, the Tri-County Canal Bridge displays the features typical of the many steel stringer structures erected on Nebraska's highways in the 1920s and 1930s.

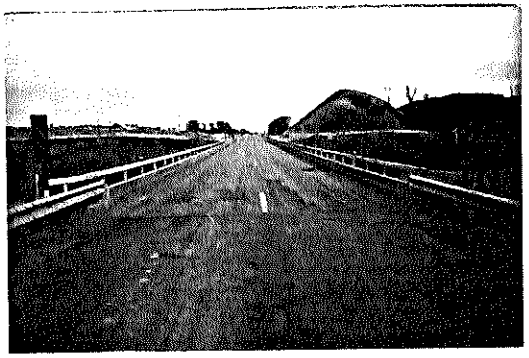
NAME(S) OF STRUCTURE

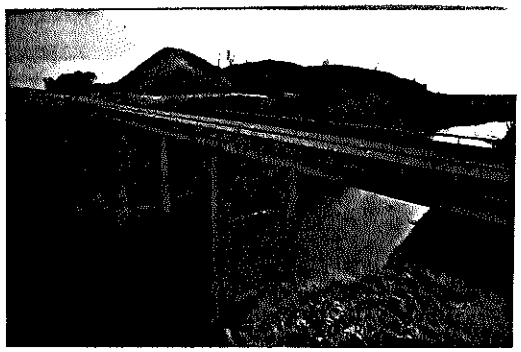
Tri-County Supply Canal Bridge

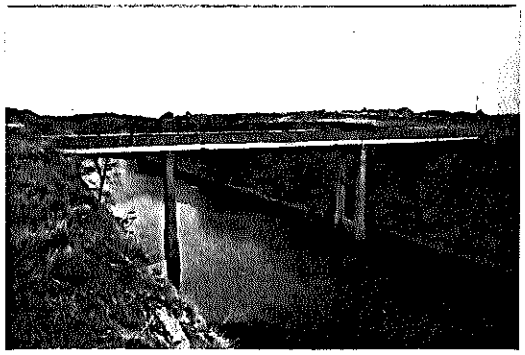
PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP







SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number S283 05035; "TRi-County Project P.W.A. D-3400; Deck Girder Spans..." construction drawing by Public Works Administration, 21 October 1937; field inspection by Clayton Fraser, 30 March 1990.

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Platte River Bridge HALL01
NDOR: C004013705P

DATE(S) OF CONSTRUCTION
1924; moved 1971

LOCATION
county road over South Channel of the Platte River; S29, T10N, R9W
2.5 miles north of Doniphan; Hall County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 49)

CONDITION
excellent

OWNER
Hall County

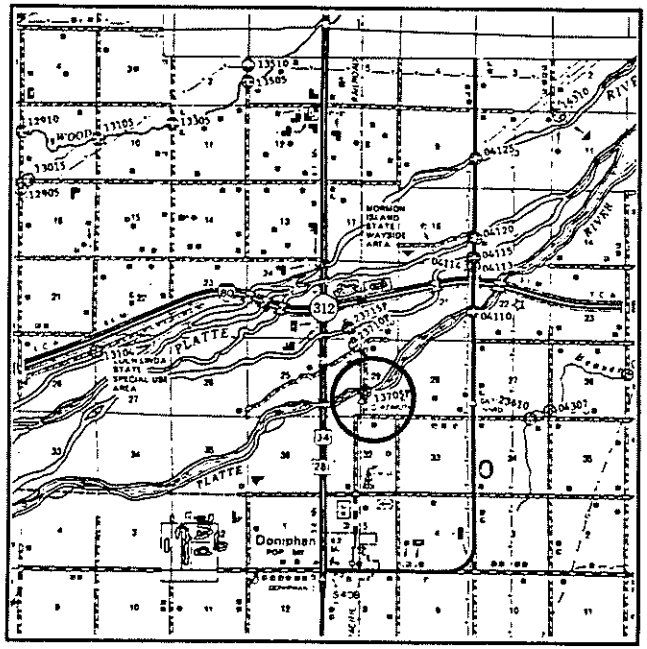
span number:	6	superstructure:	steel, 5-panel, rigid-connected Pratt pony truss
span length:	100.0'	substructure:	steel pile bent abutments and piers with concrete caps
total length:	606.0'	floor/decking:	concrete decking over I-beam stringers
roadway wdt.:	15.7'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 channel with batten plates; vertical: 4 angles with continuous plates; diagonal: 2 angles with batten plates; lateral bracing: round bar; floor beam: I-beam bolted to vertical; guardrail: 2 angles with Armco at approaches

On July 6, 1916, Merrick and Polk counties applied jointly to the Nebraska State Engineer for state aid funding for a vehicular bridge over the Platte River between the two counties. Located immediately south of the small town of Silver Creek, the multi-span structure would be paid one-half by the state, with the remaining half divided equally between the counties. It was not until early 1924 that engineers for the Nebraska Department of Public Works designed a ten-span steel pony truss for the Silver Creek crossing. Rated at a 15-ton capacity, the concrete-decked structure was let for competitive bids in April with alternate foundations of steel, wood and concrete piling. Bids were received from several bridge companies in Central City, the Merrick county seat, on May 20, 1924, and the construction contract was awarded to the Western Bridge and Construction Company. The Omaha-based contractor used steel rolled by Inland to complete the bridge the following year for a total cost of $94,200. The Silver Creek Bridge carried traffic until its replacement in 1971. At that time the concrete deck was removed and six of the spans were trucked to Hall County (the other four were scrapped). They were re-erected at this county road crossing of the Platte River south of Grand Island, where they presently carry light traffic.

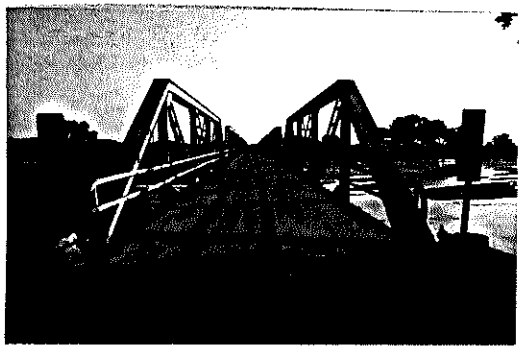
The longest-span pony truss developed by the state engineer was 100 feet; through trusses were typically used for longer spans. This length worked particularly well on the multiple-span state aid bridges built over Nebraska's wide, shallow rivers. Eight state aid bridges were constructed using multiple riveted pony trusses, most of them in the mid-1920s, when the riveted long-span pony truss found its greatest acceptance in Nebraska. Two of these, the Lisco and Lewellen State Aid Bridges (**GARD01** and **GARD02**) in Garden County, remain in place in their original condition. (A non-state aid structure, the Broadwater Bridge (**MORR01**), is also in unaltered condition.) The others have been removed. The dismantling and moving of the Silver Creek Bridge makes its evaluation problematic - certainly it no longer is historically significant as an important crossing of the Platte River in its present location - but the fact that it is only one of four such multiple long-span riveted pony trusses left in Nebraska increases its technological significance.

NAME(S) OF STRUCTURE
Platte River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C004013705P; Aivars G. Ronis, "Nebraska State Aid Bridges: 1911-1936," typewritten report by Nebraska Department of Roads, 1971, revised 1978, n.p.; Department of Public Works, **Fifteenth Biennial Report, 1923-24**, pages 153, 156, 161; oral interview with Daniel Hostler, Hall County Engineer, by Clayton Fraser and Paula Sutton, 7 September 1989; original construction drawings for construction of 1971 substructure, located at Hall County Highway Department, Grand Island, Nebraska; field inspection by Clayton Fraser, 9 July 1989.

INVENTORIED BY
Clayton B. Fraser and Paula E.M. Sutton

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Nine Bridges Bridge HALL02
NDOR: none

DATE(S) OF CONSTRUCTION
1913

LOCATION
abandoned county road over North Channel of Platte River; S24, T10N, R10W
3.9 miles north of Doniphan; Hall County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / abandoned

RATING NRHP eligible (score: 64)

CONDITION
good

OWNER
Fred Bosselman, Grand Island, Nebraska

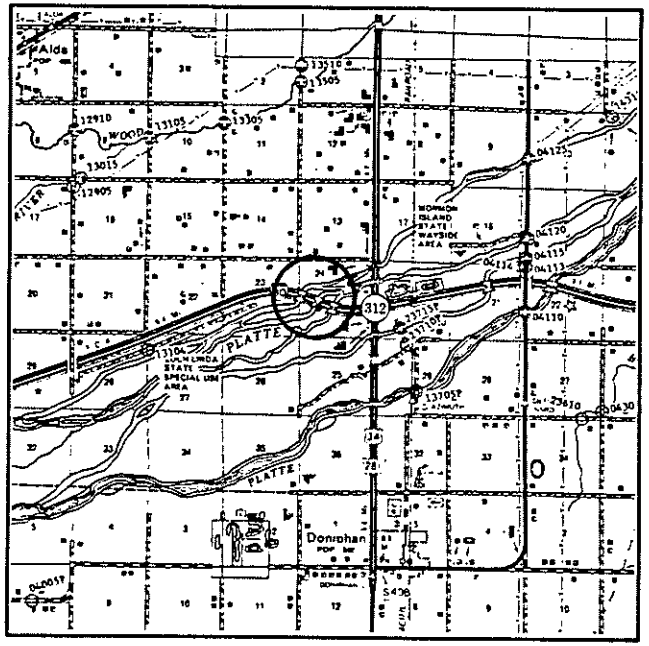
span number:	3	superstructure:	steel, 4-panel, pin-connected Pratt half-hip pony truss
span length:	60.0'	substructure:	steel pile bent abutments and piers
total length:	185.0'	floor/decking:	new timber decking over I-beam stringers
roadway wdt.:	16.0'	other features:	upper chord: 2 channels with cover and batten plates; bottom chord: 2 looped rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 looped rectangular eyebars; counter: 1 round eyebar with turnbuckle; floor beam: I-beam, U-bolted to lower chord pin; guardrail: lattice

Early in 1911 citizens of Doniphan Township pledged $1000 toward construction of a new bridge over the Platte River to replace the existing timber structure that linked the area with Grand Island. The county board of supervisors in March began considering the bridge and its approaches. Four months later the board contracted for a new north-south road north of Doniphan, known as "Nine Bridges Road", that would serve the proposed crossing. The county waited a year and a half before acting on the bridge itself, however. After soliciting advice from the Union Pacific Railroad, which spanned the Platte at many locations, the supervisors decided to constrict the river's north channel width by some 340 feet and erect a three-span pony truss. Finally, on Christmas Eve, 1912, they ordered the new structure from the Standard Bridge Company, which then held the county's annual bridge contract. Construction progressed quickly; using steel components rolled by Jones and Laughlin, Standard completed the structure by the end of May 1913. The Nine Bridges Bridge carried mainline traffic until construction of a parallel span over the Platte on U.S. Highway 281/34. Sold to the adjacent landowner in the mid-1960s, it is no longer open to traffic but is maintained in essentially unaltered condition.

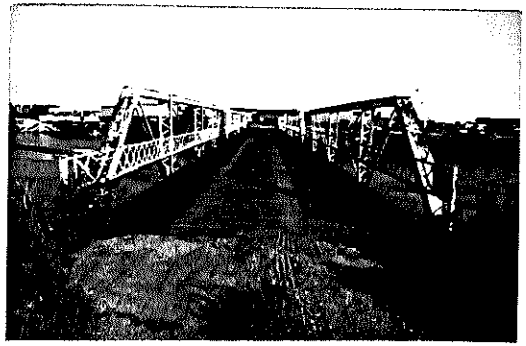
A subtype of the venerable Pratt pony truss, the Pratt half-hip configuration was marketed extensively by midwestern bridge companies in the early 1900s. Its primary advantage as a structural type was that, by eliminating the vertical members at the hip connections, it was more materially conservant than the standard Pratt. Its disadvantage was that it was generally limited to short-span applications: typically 30-60 feet. But Nebraska's myriad small streams lent themselves to this range, and, as a result, thousands of single-span half-hip pony trusses were erected across the state between 1900 and 1915. The half-hip was used less often for longer crossings, because its intrinsically short length necessitated more substructural work than did longer spans. The Nine Bridges Bridge was therefore unusual when it was constructed across the Platte River, and it is even more uncommon today, due to attrition of virtually all other multiple-span examples of this truss type. It is historically significant as a regionally important crossing of a major watercourse and technologically significant as an outstanding example of its structural type.

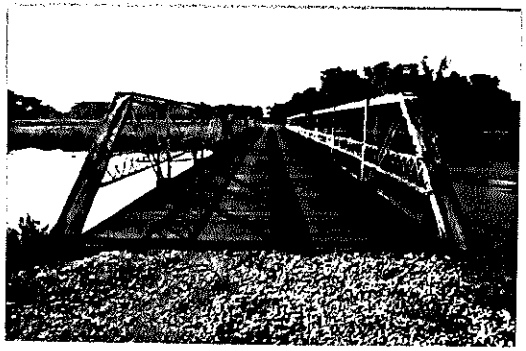
NAME(S) OF STRUCTURE
Nine Bridges Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Proceedings of the Hall County Board of Supervisors, Book 8: 28 March 1911 (pages 154-55), 29 March 1911 (page 165), 16 June 1911 (page 168), 31 July 1911 (page 176), 26 March 1912 (page 225), 10 June 1912 (page 240), 20 August 1912 (pages 254-57) , 13 December 1912 (page 277), 24 December 1912 (page 279), 4 March 1913 (page 300), 27 May 1913 (page 316), located at Hall County Courthouse, Grand Island, Nebraska; field inspection by Clayton Fraser, 8 July 1989.

INVENTORIED BY
Clayton B. Fraser and Paula E.M. Sutton

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Chapman State Aid Bridge
NDOR: C004101505P

HAMIO1

DATE(S) OF CONSTRUCTION
1932

LOCATION
county road over the Platte River; S29, T12N, R7W
7.2 miles southwest of Marquette; Hamilton County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 29)

CONDITION
excellent

OWNER
Hamilton County

span number:	14	superstructure:	steel cantilevered stringer
span length:	72.0'	substructure:	concrete abutments (new), wingwalls with steel pile bent piers
total length:	840.0'	floor/decking:	asphalt over concrete decking with steel stringers
roadway wdt.:	30.0'	other features:	guardrail: concrete with concrete curb

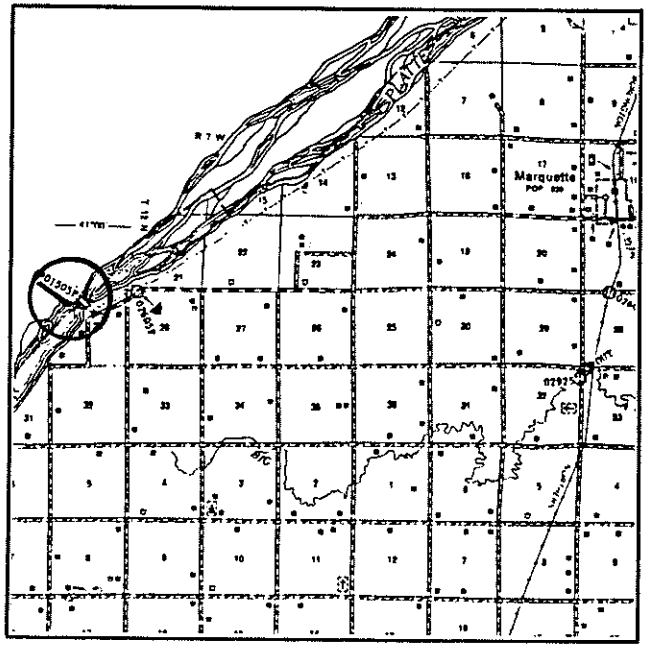
To provide for bridge construction across the state's larger streams, the Nebraska Legislature passed the State Aid Bridge Act in 1911. The program established a fund to aid the erection of bridges measuring at least 175-feet, whereby the state and county shared in the bridge's cost. Plans for such bridges were prepared by the state engineer's office on an individual basis as standardized plans were not considered practical for large-scale river bridges. In 1921 the state legislature reduced the length of eligible bridges to 100 feet so that more counties could obtain such assistance. Among the last structures built under the program before the legislature authorized its final appropriation in 1933 was this 14-span, 840-foot crossing of the Platte River between Merrick and Hamilton Counties. Known as the Chapman State Aid Bridge, the structure carries a county road across the Platte about seven miles southwest of Marquette. The bridge was built under project SAB-866 in 1932 as a series of cantilevered steel stringers, supported by steel pile bent piers. The state aid bridge program ended in 1936; the Chapman State Aid Bridge continued to carry traffic at this regionally important crossing until its roadway was widened in 1982 by the addition of two stringers and lateral extension of the abutments and piers.

Before the state aid bridge program was phased out in 1936, the bureau of roads and bridges had designed and built some 77 structures, most of which carried traffic over the larger rivers. Today 16 state-built state aid bridges remain in use, with varying degrees of physical integrity. Of these, the Chapman State Aid Bridge is one of the least noteworthy, technologically. Nevertheless, it does possess some significance as a regionally important crossing of the Platte River and for its representation of this important state-sponsored construction program.

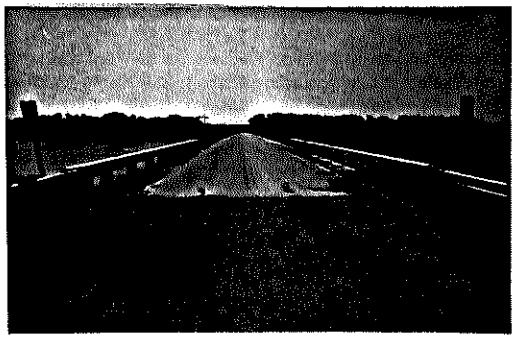
NAME(S) OF STRUCTURE

Chapman State Aid Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C004101505P; Aivars G. Ronis, "Nebraska State Aid Bridges," typewritten report by Nebraska Department of Roads, 1971, revised September 1978, n.p.; Nebraska Department of Public Works, Nineteenth Biennial Report, 1931-32, page 91; field inspection by Clayton Fraser, 9 July 1989.

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Big Blue River Bridge
NDOR: C004104310

HAMI02

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over West Fork of Big Blue River; S27/28, T9N, R5W
3.3 miles east of Stockham; Hamilton County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 8)

CONDITION
good

OWNER
Hamilton County

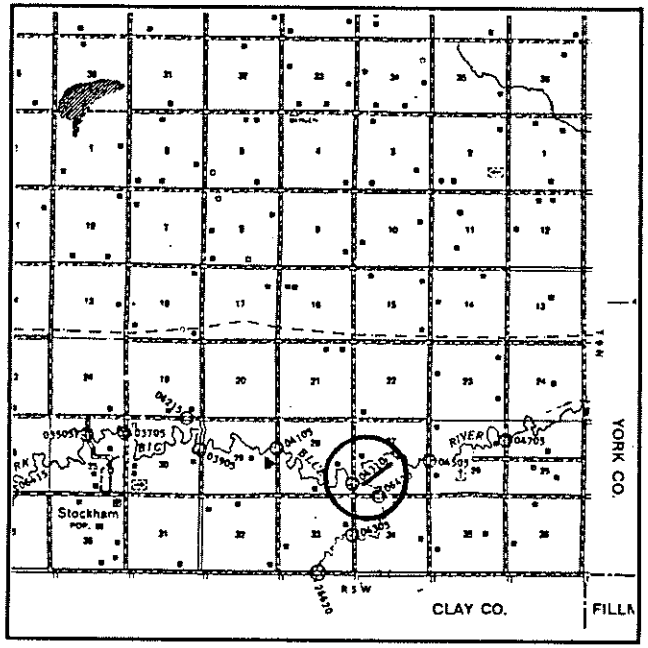
span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt half-hip pony truss, skewed
span length:	60.0'	substructure:	steel pile bent abutments with timber wingwalls
total length:	70.0'	floor/decking:	earth over corrugated steel deck
roadway wdt.:	22.6'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 punched rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 punched rectangular eyebars, 1 looped eyebar; lateral bracing: round bar with threaded ends; floor beam: I-beam, field bolted to vertical; guardrail: lattice

This bridge carries a secondary county road over the West Fork of the Big Blue River a little more than three miles east of Stockham in Hamilton County's southeast corner. The superstructure is comprised of a heavily skewed pinned Pratt half-hip pony truss, supported by steel pile bents with timber wingwalls. Evidently moved to this site from another location, the Big Blue River Bridge is not mentioned specifically in the Hamilton County Commissioners records. As a result, details of its construction history remain vague. Based though, on its pinned construction, half-hip configuration and relatively heavy web members, it appears to have been fabricated around 1920.

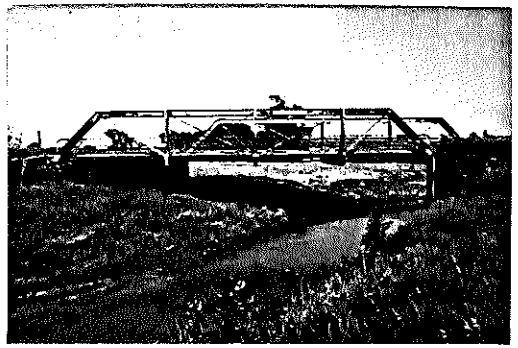
With its construction history largely undocumented and its original location unknown, the Big Blue River Bridge lacks any appreciable level of historical or technological significance.

NAME(S) OF STRUCTURE
Big Blue River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C004104310; field inspection by Clayton Fraser, 11 July 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Beaver Creek Bridge
NDOR: C004114110

HAMI03

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
county road over Beaver Creek; S16/17, T10N, R5W
3.2 miles southwest of Hampton; Hamilton County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 19)

CONDITION
good

OWNER
Hamilton County

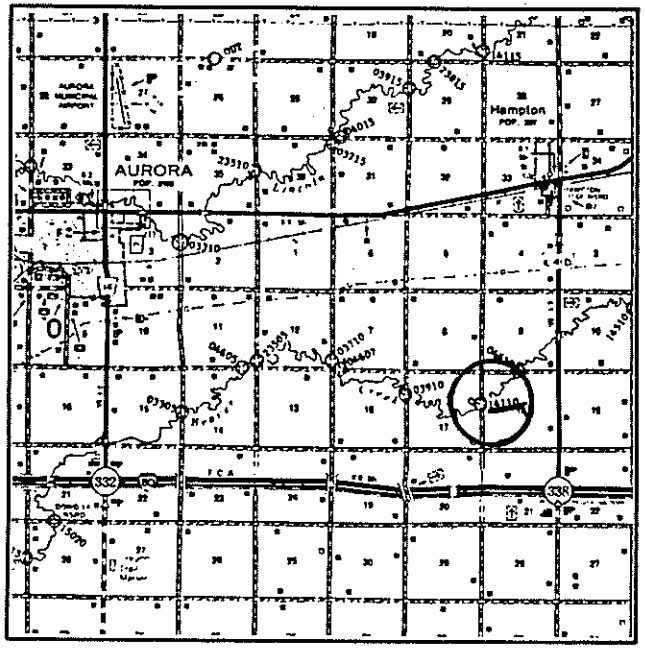
span number:	1	superstructure:	steel, 3-panel, pin-/ rigid-connected Pratt pony truss
span length:	40.0'	substructure:	concrete abutments and wingwalls
total length:	40.0'	floor/decking:	timber decking over I-beam stringers
roadway wdt.:	15.8'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 punched rectangular eyebars; vertical: 4 angles with batten plates; diagonal: 2 round eyebars; floor beam: I-beam, field bolted to vertical below lower chord; guardrail: 2 angles

Located southwest of Hampton, this small-scale bridge carries a gravel-surfaced county road over Beaver Creek in southeastern Hamilton County. The superstructure is comprised of a three-panel, pin-connected Pratt pony truss with bolted gusset plates at the hip connections, supported by concrete abutments and wingwalls. Fabricated from steel components rolled by the Cambria mills from a standard design by the state engineer's office, the bridge appears to be in its original location, and has not been significantly altered. No references to it have been found in minutes of the Hamilton County Commissioners, and as a result, its construction history remains unknown. The truss appears to date from around 1915: a period in which the Standard Bridge Company of Omaha held Hamilton County's annual bridge construction contracts.

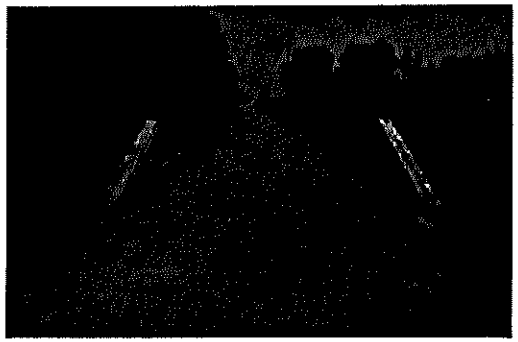
Built from a state standard design during a period of intense bridge construction activity in Nebraska, the Beaver Creek Bridge typifies small-scale truss construction in the state. Its lack of documentation and unremarkable dimensions and detailing, however, tend to limit its historical and technological significance.

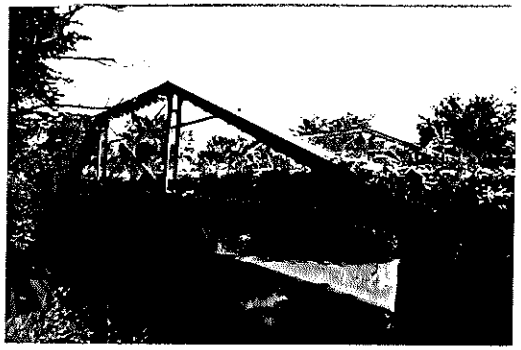
NAME(S) OF STRUCTURE
Beaver Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C004114110; field inspection by Clayton Fraser, 11 July 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Aurora Viaduct
NDOR: S034 24769

HAMI04

DATE(S) OF CONSTRUCTION
1936

LOCATION
U.S. Highway 34 over Burlington Northern Railroad; S2, T10N, R7W
4.0 miles west of Aurora; Hamilton County, Nebraska

USE (ORIGINAL / CURRENT)
highway overpass / highway overpass

RATING potentially NRHP eligible (score: 49)

CONDITION
excellent

OWNER
Nebraska Department of Roads

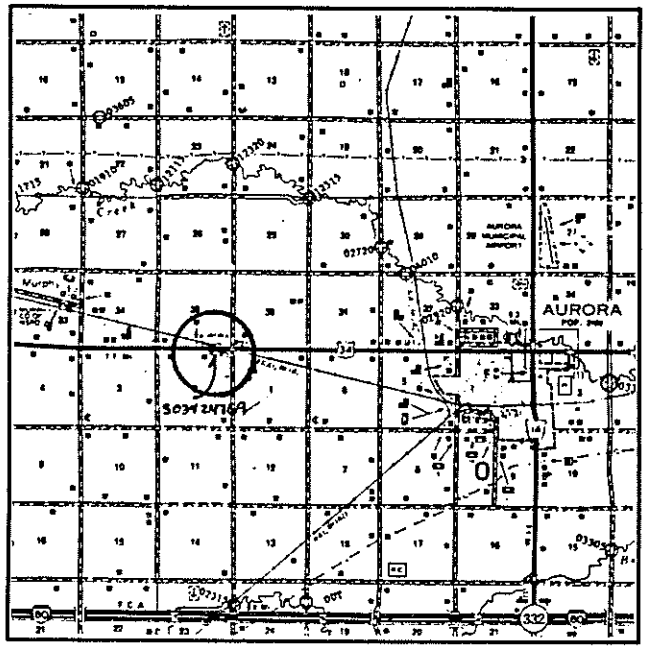
span number:	3	superstructure:	steel through girder with cantilevered steel stringer approach spans
span length:	125.0'	substructure:	concrete abutments, wingwalls and spill-through piers
total length:	632.3'	floor/decking:	asphalt over concrete decking with steel stringers
roadway wdt.:	24.0'	other features:	guardrail: solid concrete and Armco at approaches

The Aurora Viaduct carries State Highway 34 over tracks of the Burlington Northern Railroad four miles west of Aurora in central Hamilton County. The structure consists of three 125-foot steel through girder spans flanked by five cantilevered steel girder approach spans, for an overall length of 632 feet. Plans for the structure were drawn by Nebraska's Bureau of Roads and Bridges in November 1935, and competitive bids for its construction were solicited soon thereafter. Using steel fabricated at the McClintic - Marshall Corporation's Chicago plant, the Aurora Viaduct was built by the Koehler Construction Company of Lincoln under project WPGH-228-B. Since its completion, the overpass has carried vehicular traffic along U.S. Highway 34 - a main east-west route between Aurora and Grand Island. Aside from the new deck, installed in 1977, it is little changed from its original construction. As such, it possesses a relatively high degree of physical integrity.

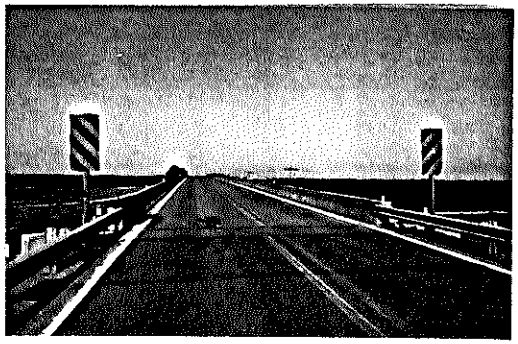
The Nebraska Bureau of Roads and Bridges experimented extensively with long-span beam construction for its river bridges and overpasses in the 1930s. With its 125-foot main spans, the Aurora Viaduct was one of the longest such structures built during this time. It is thus technologically significant as one of the better examples of highway bridge design in Nebraska, The structure is historically important as a regionally used grade separation, built as part of a national Depression Era program intended to create jobs and increase highway safety.

NAME(S) OF STRUCTURE
Aurora Viaduct

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number S034 24769; State of Nebraska, Department of Roads and Irrigation, Special Design H-15, Plans for Aurora Viaduct over CB&Q Railroad, Hamilton County, 9 November 1935; Nebraska Department of Roads, Bridge Division, Aurora Viaduct (plans for approach and concrete deck work) December 1976; field inspection by Clayton Fraser, 11 July 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Sappa Creek Bridge
NDOR: C004200510

HARL01

DATE(S) OF CONSTRUCTION
ca.1915; moved 1938(?)

LOCATION
county road over Sappa Creek; S20/21, T2N, R20W
0.5 miles south of Stamford; Harlan County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 19)

CONDITION
good

OWNER
Harlan County

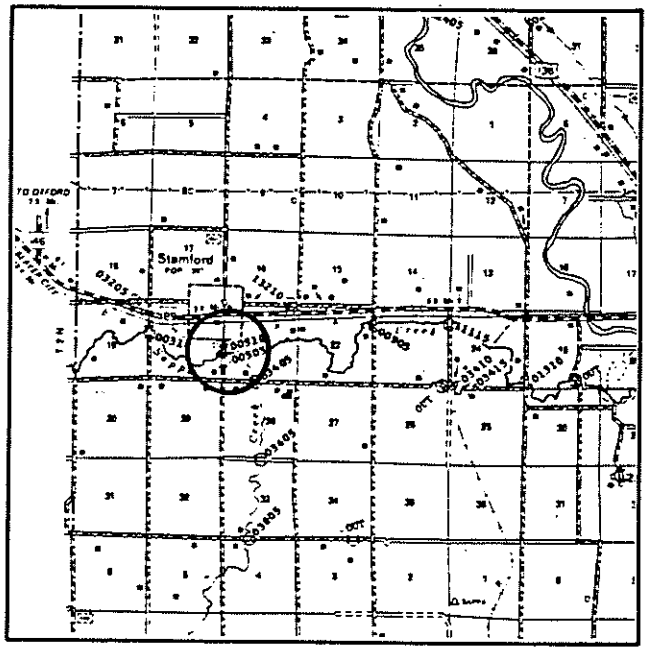
span number:	1	superstructure:	steel, 5-panel, rigid-connected Camelback pony truss
span length:	90.0'	substructure:	concrete abutments with flared, sloped wingwalls
total length:	91.0'	floor/decking:	concrete deck on I-beam stringers
roadway wdt.:	25.5'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: back-to-back channels with battens; vertical: 4 angles with battens; diagonal: 2 angles with battens; floor beam: I-beam riveted to superstructure; bottom lateral: cross-braced angles; railing: 2 angles bolted to verticals

Carrying a county road over Sappa Creek, this bridge is located just south of the Village of Stamford, on the line between Sections 20 and 21, T2N, R20W, Sappa Township. The structure is a single-span, riveted Camelback pony truss, resting on concrete abutments. County records show that two bridges with spans of 24 and 36 feet were constructed on the line between Sections 21 and 22 of Sappa Township in 1929. One of these bridges probably crossed Sappa Creek, indicating that the existing truss was built sometime after 1929. This estimate is bolstered by the fact that the Nebraska Department of Roads assigns the bridge a construction date of 1938. However, the structure's original roadway width and its similarity to the Prairie Dog Creek Bridge (**HARL05**) suggest an erection date of ca.1915. The Monarch Engineering Company of Falls City NE, which promoted the Camelback configuration, was active in Harlan County at this time. It is possible that the Sappa Creek Bridge was constructed at another location in the 1910s, and moved to this crossing in the 1930s (thus explaining NDOR's date of 1938). In 1976, county crews widened the bridge from 18 to 26 feet by welding 8-foot I-beam sections to the east end of the floor beams and reconnecting the east web.

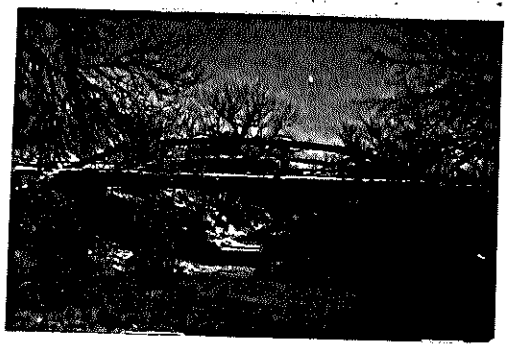
Like the Warren truss, the riveted Camelback pony truss was used sparingly as a vehicular truss type by Nebraska's counties. Two such trusses remain in use in Harlan County. The Sappa Creek Bridge is a representative example of this uncommon structural type. The alterations have compromised its integrity substantially, however, diminishing its interpretive value.

NAME(S) OF STRUCTURE
Sappa Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C004200510; oral interview with Wayne Dietz, Harlan County Highway Superintendent, by Demian Hess, 18 January 1990; Proceedings of the Harlan County Commissioners, located in Harlan County Courthouse, Alma, Nebraska, see the following entry: 6 August 1929 (Book 6, page 172); field inspection by Demian Hess, 21 January 1990.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Sappa Creek Bridge
NDOR: C004200905

HARL02

DATE(S) OF CONSTRUCTION
1916

LOCATION
county road over Sappa Creek; S22/23, T2N, R20W
2 miles east of Stamford; Harlan County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 44)

CONDITION
good

OWNER
Harlan County

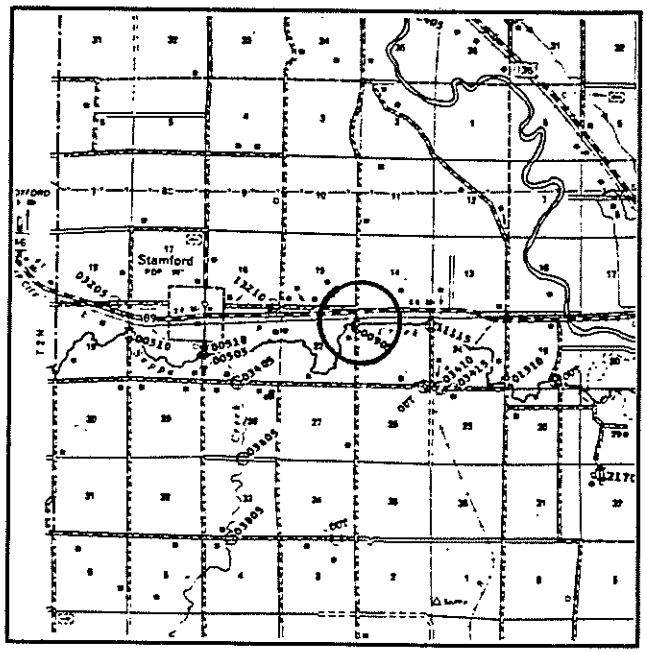
span number:	1	superstructure:	steel, 4-panel, rigid-connected Pratt pony truss
span length:	62.0'	substructure:	timber pile bent abutments and piers with timber backwalls
total length:	142.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	16.3'	other features:	upper chord: 2 angles; lower chord: 2 angles; vertical: 2 angles; diagonal: 2 angles; sway bracing: outrider-type bracing, composed of steel plate extending floor beam beyond deck and braced to outer web by 2 angles; floor beam: 2 angles; bottom lateral: cross-braced, circular-section eyerods with turnbuckles; railing: steel cables

This bridge carries a gravel-surfaced county road over Sappa Creek on the line between Sections 22 and 23, T2N, R20W, Sappa Township. The bridge consists of a riveted Pratt pony truss, with two timber stringer approaches on the north and three timber stringer approaches on the south. The bridge has good historical integrity, being in good physical condition and having no major alterations. A builder's plate mounted on the west web notes that the bridge was built by the Milwaukee Bridge Company in 1916. Unfortunately, the Harlan County Commissioners' records for 1916 do not refer to this bridge or the Milwaukee Bridge Company, suggesting that it was purchased from outside the county and later moved to its present location. Harlan County's wide variety of bridge types also seems to suggest that this bridge has been purchased and moved, along with several of the others at various times.

With its upper chords, endposts and virtually all of the other web members comprised of steel angles, the truss is atypically configured among Nebraska's secondary road spans. Numerous such "2-angle" trusses remain in use in Missouri, and a few are in place in Iowa, but in Nebraska this Pratt subtype is rare. The Sappa Creek Bridge is thus technologically noteworthy as a singular example in Nebraska of an unusual structural configuration.

NAME(S) OF STRUCTURE
Sappa Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C004200905; Proceedings of the Harlan County Commissioners, 1916, located in Harlan County Courthouse, Alma, Nebraska; field inspection by Demian Hess, 21 January 1990.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge HARL03
NDOR: C004201505

DATE(S) OF CONSTRUCTION
ca.1920

LOCATION
township road over creek; S31/32, T1N, R19W
8.5 miles south and 2 miles west of Orleans; Harlan County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 13)

CONDITION
good

OWNER
Harlan County

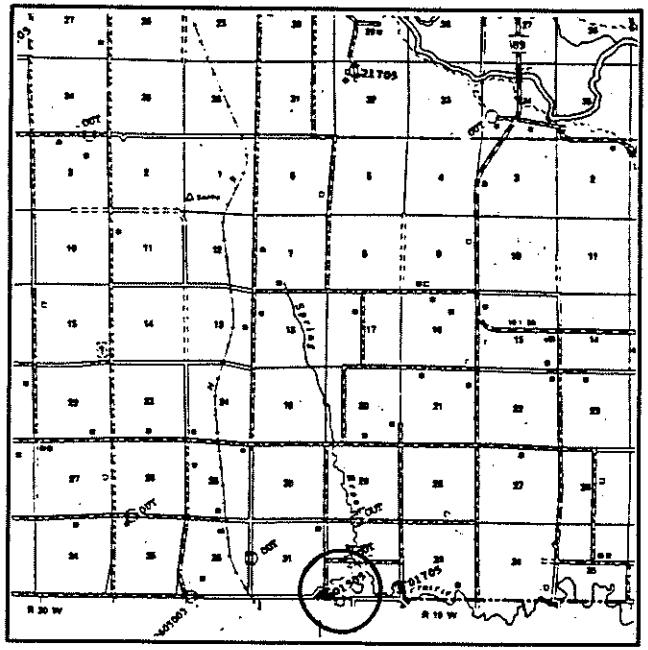
span number:	1	superstructure:	steel, 7-panel, pin-connected Pratt through truss
span length:	130.0'	substructure:	bolted, steel pile bent abutments with timber backwall
total length:	131.0'	floor/decking:	double-layer wood deck over I-beam stringers
roadway wdt.:	16.1'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: 2 eyebars; vertical: back-to-back channels with lacing; diagonal: 2 eyebars; counter: 2 circular-section eyerods with turnbuckles; portal: top and bottom struts and main portal bracing composed of back-to-back angles, intermediate bracing is single angles; overhead: channel with top and bottom plates; top lateral: cross-braced circular-section eyerods with turnbuckles; floor beam: I-beam, U-bolted to superstructure; bottom lateral: cross-braced circular-section eyerods; railing: 2 channel rails bolted to channel posts

This bridge carries an unpaved township road over a small stream on the Nebraska/Kansas state line, between Sections 31 and 32, T1N, R19W, Eldorado Township. The structure is a single-span, pinned Pratt through truss on bolted, steel pile bent abutments. The bridge has good historical integrity, being in good physical condition and having no major alterations. The Nebraska Department of Roads assigns the bridge a construction date of 1947, although it almost certainly dates to an earlier period. Pinned construction remained popular in Nebraska from the early 1900s to the mid-1920s, eventually being replaced by riveted panel connections. As late as 1922, the state prepared standardized plans for a 7-panel, pin-connected, 120-foot, Pratt through truss which was very similar to this bridge. Due to the similarity of bridges during the time period from 1910 to 1925, the bridge cannot be assigned an exact construction date and may have been moved to this site from outside of the county.

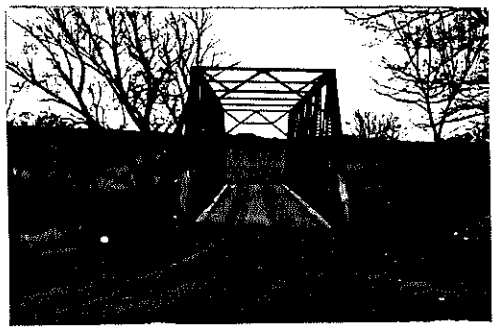
With its construction history largely undocumented, the bridge is typical of many pinned through trusses built in Nebraska from the 1910s to the 1920s.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C004201505; State of Nebraska, "Standard Bridge Plan, 120 Foot Span, 7 Panel-Pin Connected High Truss-Wood Floor," 15 July 1913, revised 1 November 1922, plan number 468, located in Nebraska Department of Roads, Bridge Department, Lincoln, Nebraska; Proceedings of the Harlan County Commissioners, 1903-1908, located in Harlan County Courthouse, Alma, Nebraska; field inspection by Demian Hess, 22 January 1990.

INVENTORIED BY	AFFILIATION	DATE
Demian Hess	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Foster Creek Bridge
NDOR: C004201620

HARL04

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over Foster Creek; S1/12, T3N, R20W
5 miles east of Oxford; Harlan County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 21)

CONDITION
good

OWNER
Harlan County

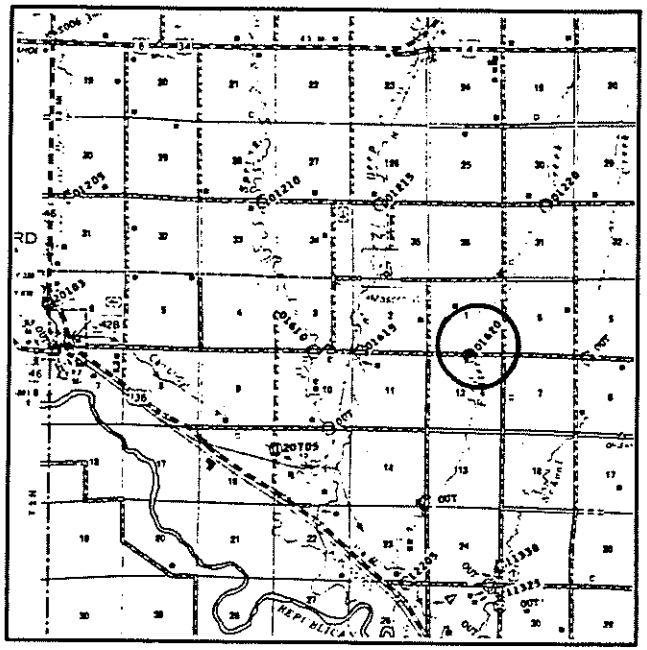
span number:	1	superstructure:	steel, 2-panel, rigid-connected Pratt half-hip pony truss
span length:	28.0'	substructure:	steel pile bent abutments with timber back and flared wing walls
total length:	29.0'	floor/decking:	wooden deck over I-beam stringers
roadway wdt.:	18.0'	other features:	upper chord: back-to-back channels; lower chord: 2 angles with battens; vertical: 4 angles with lacing; diagonal: 2 angles with battens; sway bracing: metal plate extends floor beams and is tied to outer web by 2 angles, forming outrider; floor beam: I-beam bolted to superstructure; bottom lateral: cross-braced circular-section eyerods

This small-scale bridge carries a gravel-surfaced county road over a dry creek bed. It is located on the line between Sections 1 and 12, T3N, R20W, Emerson Township. The structure is a 2-panel, riveted Pratt half-hip pony truss on steel pile bent abutments. The structure's detailing and dimensions points toward a construction date of ca.1910, before the county began to use state standardized plans. The bridge thus appears to be an early, unaltered example of riveted construction, although the contractor is not known.

Although its riveted construction is unusual, this bridge is in reality a typical example of a relatively common structural type.

NAME(S) OF STRUCTURE
Foster Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C004201620; Proceedings of the Harlan County Commissioners, 1900-1910, located in Harlan County Courthouse, Alma, Nebraska; field inspection by Demian Hess, 21 January 1990

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Prairie Dog Creek Bridge HARL05
NDOR: C004201705

DATE(S) OF CONSTRUCTION
1913

LOCATION
township road over Prairie Dog Creek; S32/33, T1N, R19W
8.5 miles south and 1 mile west of Orleans; Harlan County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 47)

CONDITION
good

OWNER
Harlan County

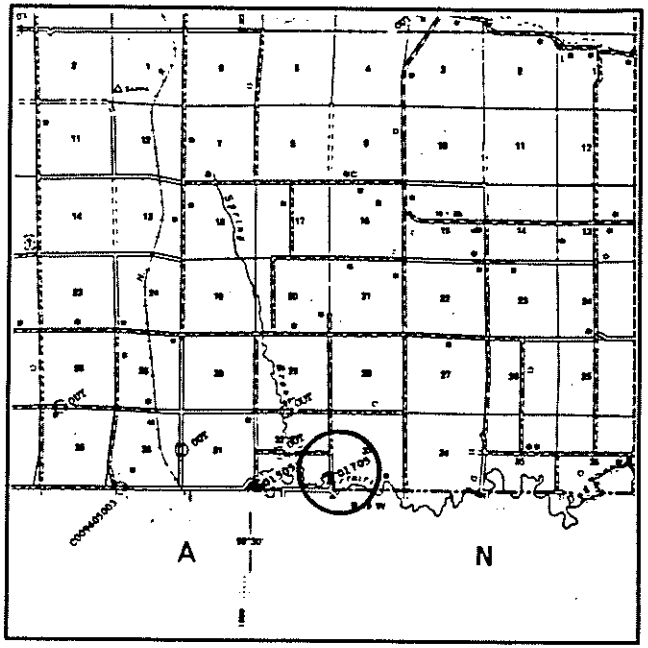
span number:	1	superstructure:	steel, 5-panel, rigid-connected Camelback pony truss
span length:	80.0'	substructure:	bolted, steel pile bent abutments
total length:	82.0'	floor/decking:	double-layer wood deck over I-beam stringers
roadway wdt.:	16.4'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: back-to-back channels with battens; vertical: 4 angles with lacing; diagonal: 2 angles; floor beam: I-beam riveted to angle which is bolted to hanger plate - hanger plate riveted to lower chord and bolted to bottom of vertical; bottom lateral: cross-braced circular-section eyerods; railing: double angle rail bolted to angle posts

Residents petitioned for a bridge over Prairie Dog Creek between Sections 32 and 33 of Eldorado Township on February 8, 1910. The county board initially laid over the petition, but finally selected a location for the crossing in April 1911. In June 1913, the county board ordered that an 80-foot span on "12-inch, 30-foot legs" be built on this site. Construction was conditional on whether an east-west road was opened just below Prairie Dog Creek. The road (which is still in use) was apparently opened shortly thereafter, and the Prairie Dog Creek Bridge was probably constructed by the Monarch Engineering Company of Falls City, Nebraska, which had won the county bridge contract for the year. Monarch built the bridge according to its own plans, which the county board had adopted in April. Consisting of a single rigid-connected Camelback pony truss, the bridge has carried vehicular traffic since, in essentially unaltered condition.

The Monarch Engineering Company was known throughout the Midwest for its Camelback pony trusses. All the traceable Camelbacks in Wyoming and most of the county-built Camelbacks in Colorado, for instance, were erected by Monarch between 1912 and 1930. Two such trusses have been identified in Harlan County, this bridge and the Sappa Creek Bridge (**HARL01**). The Sappa Creek Bridge is largely undocumentable due to a probable later move, but the construction history of the Prairie Dog Creek Bridge is documentable. As the earliest of some twenty Camelback pony trusses found in the statewide inventory, it is technologically significant as an well-preserved example of this Pratt truss subtype.

NAME(S) OF STRUCTURE
Prairie Dog Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C004201705; field inspection by Demian Hess, 22 January 1990; Proceedings of the Harlan County Commissioners, located in Harlan County Courthouse, Alma, Nebraska, Book 4: 8 February 1910 (page 465), 3 May 1910 (page 476), 11 April 1911 (page 553), 1 April 1913 (page 50), 6 May 1913 (page 54), 17 June 1913 (page 64); field inspection by Demian Hess, 21 January 1990.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Turkey Creek Bridge
NDOR: C004211015

HARL06

DATE(S) OF CONSTRUCTION
1899

LOCATION
county road over Turkey Creek; S22/27, T4N, R18W
2 miles west and 1 mile south of Ragan; Harlan County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 46)

CONDITION
good

OWNER
Harlan County

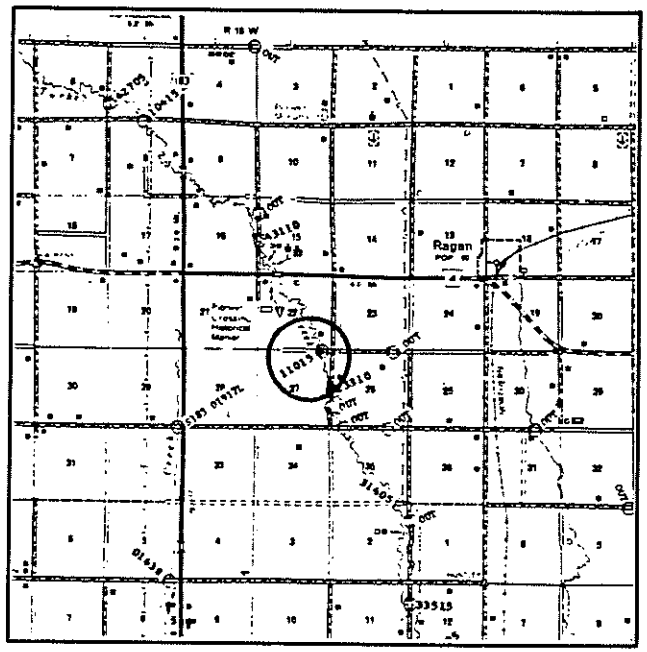
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt truss leg bedstead
span length:	46.0'	substructure:	truss legs embedded in concrete abutments with flared, sloped wingwalls
total length:	47.0'	floor/decking:	wood deck over timber stringers
roadway wdt.:	16.2'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: 2 angles with battens (end panels), 2 square-section eyerods (center panel); vertical: 4 angles with lacing; diagonal: 2 square-section eyerods; counter: 1 circular-section eyerod with turnbuckle; floor beam: I-beam connected to superstructure by hanger plate; bottom lateral: cross-braced circular-section eyerods

Located on the east-west line between Sections 22 and 27, T4N, R18W, Scandinavia Township, this small-scale bridge carries an unpaved county road over Turkey Creek. The structure consists of a single pinned Pratt bedstead, to which concrete abutments with flared, sloped wingwalls have been added. No exact references have been found to determine who built the bridge or when. However, the truss leg bedstead was reportedly first used in Nebraska sometime around 1896, remaining popular until the early 1900s. According to county records, only one steel bridge was built over Turkey Creek in Scandinavia Township in the late 1890s. In September 1899, the County Commissioners ordered that an iron or steel bridge be constructed over the creek just west of "G. Abraham's." The contract was awarded to the Canton Bridge Company of Canton OH on September 5, 1899. Comprised of steel components rolled in Pittsburgh by the Jones and Laughlin mills, this bedstead is very likely that structure. Its legs have been partially encased in concrete, but the structure remains otherwise intact.

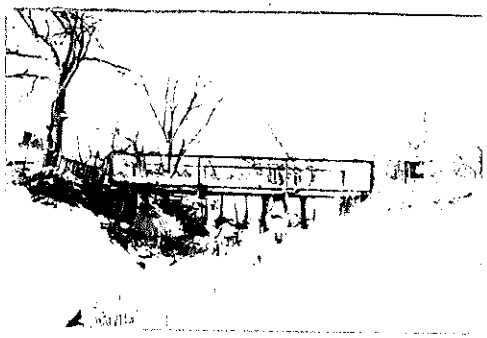
Though never as popular as the pony truss, the truss leg bedstead was a standard bridge type marketed in the late 19th and early 20th century by such midwestern firms as the Canton Bridge Company. The structure acts as a rigid frame, with its endposts extended below the truss itself to form the supports. This was both the strength and the weakness of the bedstead. The combined super-and substructure reduced erection costs somewhat, but they were prey to flood and collision damage and suffered from inherent structural weakness relating to compression stress in the lower chords. As a result all but a handful of the bedsteads built in Nebraska have since been demolished. The Turkey Creek Bridge is significant as one of the few intact bedsteads remaining in the state.

NAME(S) OF STRUCTURE
Turkey Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C004211015; Proceedings of the Harlan County Commissioners, located in Harlan County Courthouse, Alma, Nebraska, Book 3: 8 August 1899 (page 515), 5 September 1899 (pages 517, 519); Ted Johnson, "Discussion of Steel Foundations for Steel Bridges Constructed in the Missouri Valley," **Nebraska Blue Print** 26 (February 1927): 11; field inspection by Demian Hess, 21 January 1990.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Turkey Creek Bridge
NDOR: C004214505

HARL07

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over Turkey Creek; S34/35, T3N, R17W
5.5 miles north of Republican City; Harlan County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 17)

CONDITION
good

OWNER
Harlan County

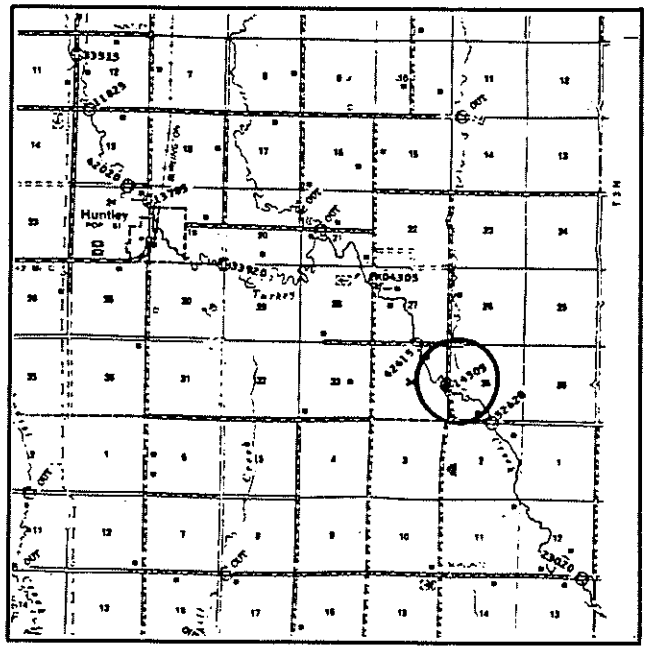
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt half-hip pony truss
span length:	46.0'	substructure:	steel pile bent and timber pile bent abutments; steel pile bent piers
total length:	103.0'	floor/decking:	double-layer wood deck over I-beam stringers
roadway wdt.:	14.9'	other features:	upper chord: back-to-back channels with cover plate and battens; lower chord: 2 square-section eyerods; vertical: 4 angles with battens; diagonal: 2 square-section eyerods; counter: 1 circular-section eyerod; sway bracing: metal plate extends ends of floor beams and is tied to outer web by 2 angles, forming outrider; floor beam: I-beam riveted to angle which is bolted to hanger plate - hanger plate riveted to bottom of vertical; bottom lateral: cross-braced, circular-section eyerod; railing: 2 angle rails bolted to verticals

This bridge carries a county road over Turkey Creek on the north-south line between Sections 34 and 35, T3N, R17W, Turkey Creek Township. The bridge consists of a pinned Pratt half-hip pony truss flanked on each side by a steel stringer approach span. The bridge has good historical integrity, having no major alterations and being in good physical condition. The half-hip design, 15-foot-wide roadway, and pinned construction suggest a date of ca.1910. Harlan County contracted with numerous bridge companies during the early 1900s, including John W. Towle, the Canton Bridge Company, the Nebraska Construction Company and the Monarch Engineering Company. As a result, it is not possible to determine which company built this bridge.

This structure is typical of many half-hip Pratt pony trusses built in Nebraska during the 1910s.

NAME(S) OF STRUCTURE
Turkey Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C004214505; Proceedings of the Harlan County Commissioners, 1900-1910, located in Harlan County Courthouse, Alma, Nebraska; field inspection by Demian Hess, 22 January 1990.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Carlson Bridge [Turkey Creek Bridge] HARL08
NDOR: C004223310

DATE(S) OF CONSTRUCTION
1906

LOCATION
county road over Turkey Creek; S26/27, T4N, R18W
2 miles west and 1.5 miles south of Ragan; Harlan County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 35)

CONDITION
good

OWNER
Harlan County

span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt half-hip pony truss
span length:	46.0'	substructure:	bolted, steel pile bent abutments and piers
total length:	62.0'	floor/decking:	wood deck over I-beam stringers
roadway wdt.:	15.8'	other features:	upper chord: back-to-back channels with cover plate and battens; lower chord: 2 square-section eyerods (end panels), 2 eyebars (center panel); vertical: 4 angles with lacing; diagonal: 2 square-section eyerods; counter: 1 circular-section eyerod with turnbuckle; sway bracing: steel plate bolted to end of floor beam and tied to outer web by 2 angles to form outrider; floor beam: I-beam riveted to angle which is bolted to hanger plate - hanger plate riveted to bottom of vertical; bottom lateral: cross-braced circular-section eyerods; railing: 2 angle rails bolted to verticals

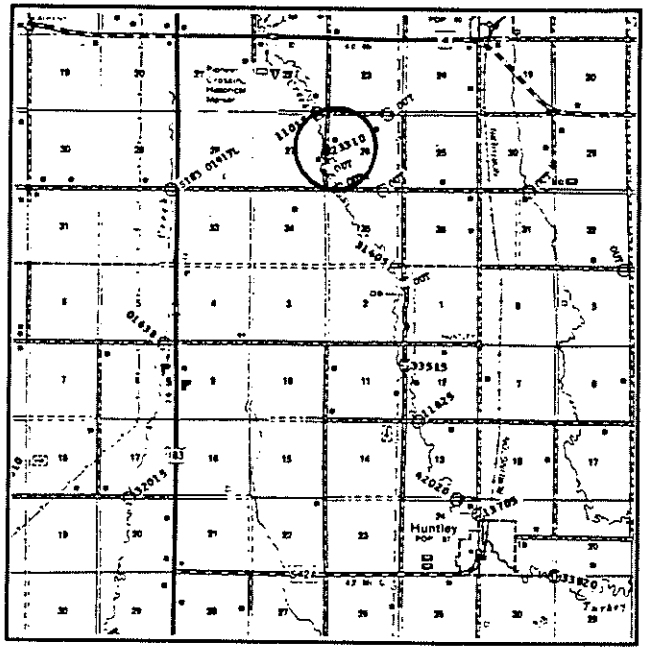
This bridge carries a county road over Turkey Creek and is located on the north-south line between Sections 26 and 27, T4N, R18W, Scandinavia Township. The structure consists of a pinned Pratt half-hip pony truss, supported by steel pile bents, with two steel stringer spans on the north approach. On August 21, 1906, the Harlan County Board ordered that a 46-foot span on red cedar piling be built over Turkey Creek near John A. Carlson's farm. According to an earlier bridge order, Carlson resided near Sections 26 and 27 of Scandinavia Township. The bridge was built by John W. Towle, who had won the annual contract to construct the county's bridges that year. Although the county had previously adopted state bridge plans, Towle apparently did not use them for this particular span, building a non-standardized half-hip truss. In all likelihood, Towle designed the bridge himself. The contractor completed the bridge by November, submitting a claim for $637.90. At some later date, the original wood pilings were replaced with steel pile bents, but the structure remains otherwise intact.

John Towle, who established the Omaha Structural Steel Works in 1906, was active in Nebraska bridge building soon after the turn of the century. Like many of his competitors, he marketed Pratt half-hip pony trusses as economical alternatives to standard Pratt designs for short-span applications. Many half-hip trusses remain in use in the state. The Carlson Bridge is a typical exmaple of this exceedingly common vehicular truss type.

NAME(S) OF STRUCTURE

Carlson Bridge [Turkey Creek Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C004223310; Proceedings of the Harlan County Commissioners, located in Harlan County Courthouse, Alma, Nebraska, Book 4: 20 June 1905 (page 167), 21 August 1906 (pages 238, 240), 20 November 1906 (page 250); field inspection by Demian Hess, 21 January 1990.

INVENTORIED BY

Demian Hess

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Hickman Creek Bridge [Eureka Creek Bridge] HARL09
NDOR: C004233825

DATE(S) OF CONSTRUCTION
1908

LOCATION
county road over Eureka Creek; S36, T2N, R17W/S1, T1N, R17W
1.2 miles east of Republican City; Harlan County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 40)

CONDITION
good

OWNER
Harlan County

span number:	1	superstructure:	steel, 2-panel, rigid-connected Pratt half-hip pony truss
span length:	35.0'	substructure:	bolted, steel pile bent abutments
total length:	37.0'	floor/decking:	wood deck over I-beam stringers
roadway wdt.:	15.7'	other features:	upper chord: back-to-back channels with cover plate and battens; lower chord: 2 angles with battens; vertical: 2 angles with lacing; diagonal: 2 angles with battens; sway bracing: outriders comprised of single angles; floor beam: I-beam riveted to angle which is bolted to gusset plate - gusset bolted to lower chord and bottom of vertical; bottom lateral: cross-braced circular-section eyerod; railing: 2 angle rails bolted to angle posts

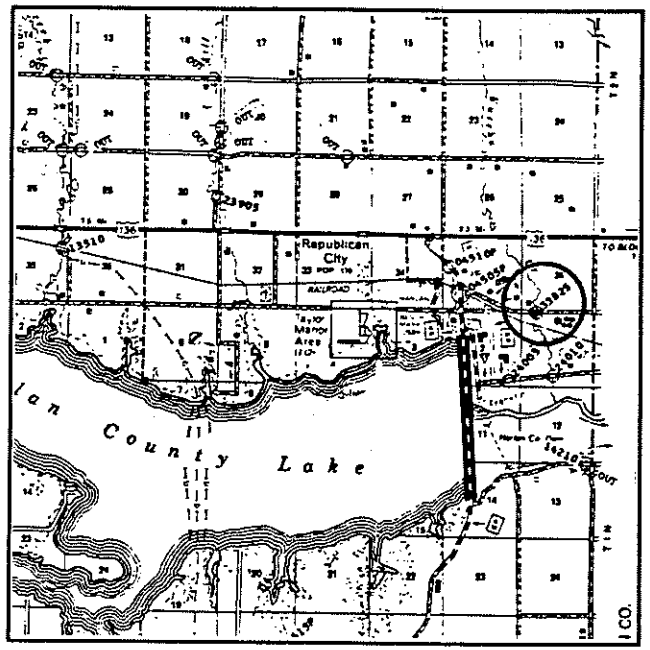
This small-scale bridge carries a county road over Eureka Creek on the east-west line between Section 1, T1N, R17W, Republican City Township, and S36, T2N, R17W, Mullally Township. The bridge is a single-span, 2-panel, Pratt half-hip pony truss. The bridge possesses good historical integrity, being unaltered and in good physical condition. The Harlan County Board first ordered a bridge built at this site on August 26, 1906. At that time, Eureka Creek was apparently called Hickman's Creek, and the bridge was only to be 32 feet in length. On January 1, 1908, the county board reported that the Hickman Creek Bridge was in poor condition and ordered John W. Towle, who had won the annual bridge contract in several previous years, to construct a new 36-foot span. Although the county had adopted state bridge plans in 1906, it is unlikely that the state designed a half-hip pony truss of the type constructed. The design, therefore, had probably been supplied by Towle.

This structure is typical of many half-hip Pratt pony trusses built in Nebraska during the early 1900s. It is noteworthy, however, for its early use of rigid connections. Several small-scale riveted pony trusses have been identified in Nebraska, some as early as the late 1890s, in the case of several Gage County trusses. Although not technologically innovative, the Hickman Creek Bridge is among the earliest of the rigid-connected trusses in the state.

NAME(S) OF STRUCTURE

Hickman Creek Bridge [Eureka Creek Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C004233825; Proceedings of the Harlan County Commissioners, located in Harlan County Courthouse, Alma, Nebraska, Book 4: 21 August 1906 (page 239), 1 January 1908 (page 301); field inspection by Demian Hess, 22 January 1990.

INVENTORIED BY

Demian Hess

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Republican River Bridge
NDOR: S089 05962

HARL10

DATE(S) OF CONSTRUCTION
1935

LOCATION
State Highway 89 over the Republican River; S34, T2N, R19W
2 miles south of Orleans; Harlan County, Nebraska

USE (ORIGINAL / CURRENT)
highway bridge / highway bridge

RATING NRHP non-eligible (score: 38)

CONDITION
good

OWNER
Nebraska Department of Roads

span number: 2
span length: 140.0'
total length: 345.0'
roadway wdt.: 23.0'

superstructure: steel, 7-panel, rigid-connected Parker through truss
substructure: concrete abutments with flared, sloped wings; concrete piers
floor/decking: concrete deck over I-beam stringers
other features: upper chord: back-to-back channels with cover plate and lacing; lower chord: back-to-back channels with battens; vertical: wide flange; diagonal: wide flange, 2 angles with battens (center panel); portal: consists of top and bottom struts with intermediate bracing, all members comprised of 2 angles with battens; overhead sway bracing: consists of top (I-beams) and bottom (back-to-back angles) struts with intermediate diagonal and vertical bracing (single angles); top lateral: cross-braced members composed of 2 angles with lacing; bottom lateral: cross-braced members composed of back-to-back angles; floor beam: I-beam riveted to superstructure; railing: angle rail on angle posts

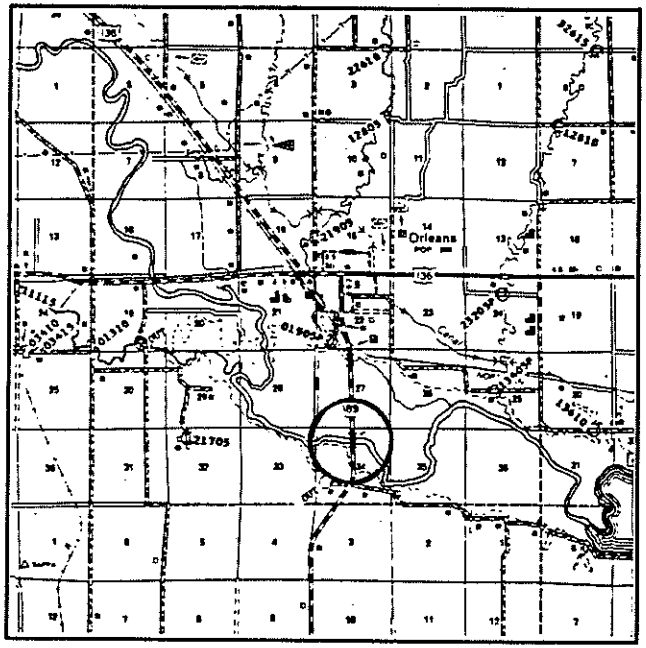
This medium-span truss carries State Highway 89 over the Republican River approximately 2 miles south of the City of Orleans. The bridge consists of two riveted Parker through trusses, approached by steel stringers on either end. In May 1935, a tremendous flood swept down the Republican River, damaging or destroying every bridge in its path. The original Orleans crossing was one of the casualties. The State of Nebraska immediately set to work rebuilding the Orleans crossing, drawing on Federal Emergency Flood Relief funds. In his biennial report for 1935/1936, the highway engineer for the district reported that "at Orleans on No. 89 new permanent bridges and grades have been constructed on a relocation." While the State of Nebraska undoubtedly prepared the plans for the new bridge, the contractor and fabricator are not known. The bridge currently is in good condition and has a high degree of physical integrity.

This structure appears to be typical of river crossings built in Nebraska during the 1930s.

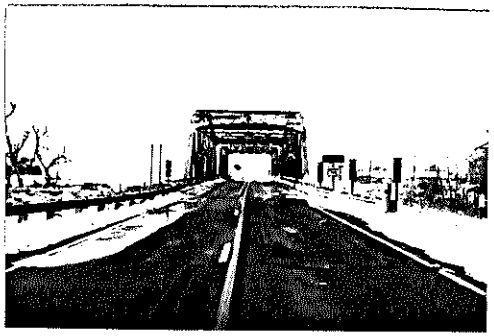
NAME(S) OF STRUCTURE

Republican River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number S089 05962; Department of Roads and Irrigation, Twenty-First Biennial Report, 1935-1936, pp. 56-61, 71, 74-75, 141; field inspection by Demian Hess, 21 January 1990.

INVENTORIED BY

Demian Hess

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Milrose Creek Bridge
NDOR: S089 06062

HARL11

DATE(S) OF CONSTRUCTION
ca.1935

LOCATION
State Highway 89 over Milrose Creek; S16/21, T2N, R19W
1 mile west of Orleans; Harlan County, Nebraska

USE (ORIGINAL / CURRENT)
highway bridge / highway bridge

RATING NRHP non-eligible (score: 15)

CONDITION
good

OWNER
Nebraska Department of Roads

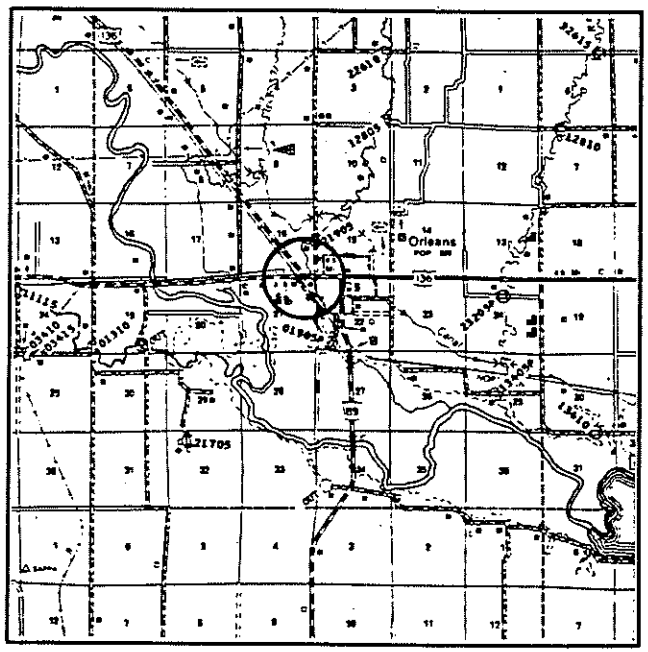
span number:	13	superstructure:	main: continuous concrete slab; approach: cantilevered, steel stringers
span length:	38.0'	substructure:	wood pile bent with concrete caps for abutments and piers
total length:	565.0'	floor/decking:	concrete deck
roadway wdt.:	26.2'	other features:	steel guardrails

Located one mile west of the City of Orleans, this bridge carries State Highway 89 over Milrose Creek and an adjacent wide, low lying drainage area. The structure is composed of 13 skewed, continuous concrete slabs supported by wood piles with concrete caps, and 5 steel, cantilevered stringer spans also supported by wood piles with concrete caps. As originally built, the structure consisted only of the 13 continuous concrete slabs. The State of Nebraska developed this type of construction during the 1930/1931 biennium. The state engineer explained in his 1931/32 report that "these structures are generally used as overflow bridges where the wide low valley of a drainage way is subject to overflow with a discharge beyond the capacity of the central natural channel." The chief advantage was the structure's low initial cost as compared to either concrete box culverts or more elaborate spans. This type of construction remained popular throughout the 1930s and 1940s, and this particular bridge probably dates to ca.1935. At some time, the state added the cantilevered steel stringer spans to the east end, probably due to a shift in the creek bed or a gradual widening of the drainage area due to erosion.

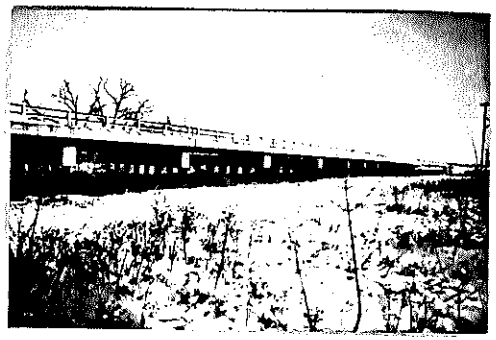
This structure is typical of state highway bridges built in the 1930s and 1940s. The addition of the steel stringer spans has compromised its physical integrity substantially.

NAME(S) OF STRUCTURE
Milrose Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
State of Nebraska, Structure Inventory and Appraisal: Structure Number S089 06062; Department of Public Works, **Nineteenth Biennial Report, 1931-1932**, pp.74-74; field inspection by Demian Hess, 21 January 1990.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Orleans Bridge [Maple Street Bridge; Flag Creek Bridge] HARL12
NDOR: U185513203P

DATE(S) OF CONSTRUCTION
1923

LOCATION
Maple Street over Flag Creek; S22, T2N, R19W
Orleans; Harlan County, Nebraska

USE (ORIGINAL / CURRENT)
city street bridge / city street bridge

RATING NRHP non-eligible (score: 24)

CONDITION
good

OWNER
City of Orleans

span number:	1	superstructure:	concrete deck girder
span length:	40.0'	substructure:	concrete abutments with flared, sloped wingwalls
total length:	42.0'	floor/decking:	concrete deck
roadway wdt.:	20.0'	other features:	railing: concrete parapet with 3 recessed rectangular panels, parapet is set on concrete curb, and is capped by concrete coping and flanked by concrete posts; lighting: concrete lampposts set in each corner of bridge; sidewalks: 6-foot walks on either side of roadway

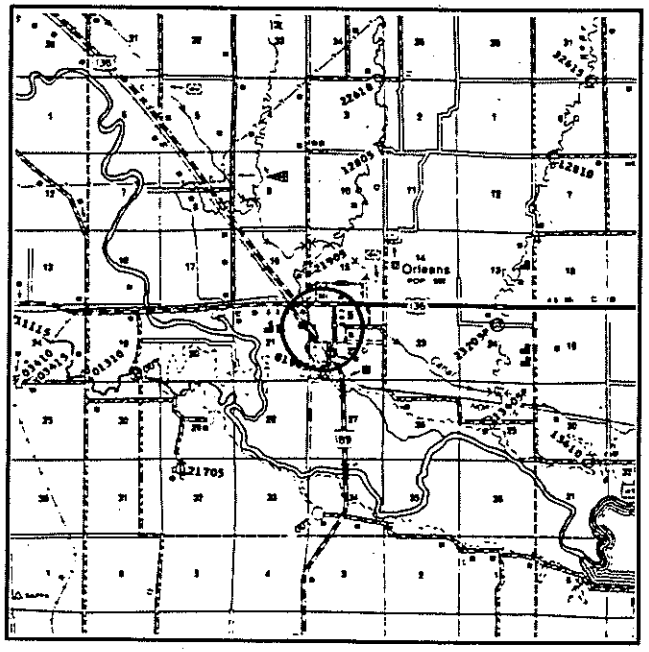
Carrying Maple Street over Flag Creek in the City of Orleans this bridge consists of a single-span, concrete girder bridge on concrete abutments. A low concrete parapet rises above the deck on both elevations, and is surmounted by a solid concrete railing detailed with recessed, rectangular panels. The railing is capped by a beveled coping, and concrete lampposts are set on top of the railing in each corner of the bridge. In May 1923, the Harlan County Board applied for federal and state aid to replace a wood-and-steel bridge over Flag Creek at Maple Street, which had been constructed ten feet off the road alignment 25 years earlier. The Nebraska Bureau of Roads and Bridges granted the request, and the following year prepared the plans and specifications for the bridge, calling for a 40-foot, 20-ton capacity, reinforced-concrete girder structure. The bureau awarded a construction contract for the Orleans Bridge (State-Federal Aid Project No. 220) in May 1924 for $7333.64. The bridge was to have a twenty-foot roadway with four-foot-wide sidewalks on either side and lamp posts in each corner. In his report for 1924, the District Highway Engineer noted that the Orleans bridge was virtually identical to "a neat little forty foot concrete girder bridge" built in Republican City. The Orleans Bridge has carried city traffic since, with only minor alterations and moderate collision damage to the parapet walls.

The Orleans Bridge is an excellent example of state-designed concrete girder bridge construction in the 1920s.

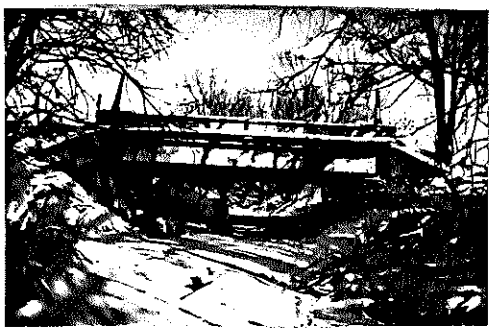
NAME(S) OF STRUCTURE

Orleans Bridge [Maple Street Bridge; Flag Creek Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number U185513203P; Department of Public Works, **Fifteenth Biennial Report**, 1923-24, pages 112-113, 138; Proceedings of the Harlan County Commissioners, located in Harlan County Courthouse, Alma, Nebraska, Book 4: 9 November 1909 (page 438), 8 August 1911 (page 577), 10 May 1921 (page 606); Book 6: 8 November 1921 (page 8), 9 May 1922 (page 19), 11 July 1922 (page 27), 23 February 1923 (page 48), 8 May 1923 (page 57); field inspection by Demian Hess, 21 January 1990.

INVENTORIED BY

Demian Hess

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge HICH01
NDOR: C004402805P

DATE(S) OF CONSTRUCTION
1908

LOCATION
county road over intermittent stream; S8, T2N, R34W
2.0 miles east of Stratton; Hitchcock County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 38)

CONDITION
good

OWNER
Hitchcock County

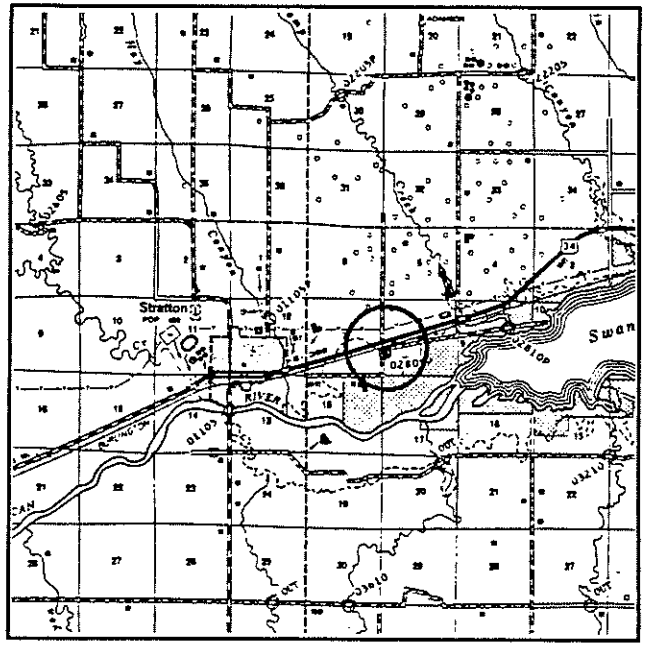
span number:	1	superstructure:	reinforced concrete slab
span length:	20.0'	substructure:	concrete abutments and wingwalls
total length:	23.0'	floor/decking:	concrete deck
roadway wdt.:	18.0'	other features:	concrete curb; angled haunches at abutments; **"08, IDEAL CEMENT"** sandblasted on both spandrel walls

Located along a county road (old U.S. Highway 34), between the small town of Stratton and the western shore of Swanson Reservoir, this bridge crosses an unnamed stream just south of modern U.S. Highway 34. The structure is a 20-foot, single-span concrete slab with angled haunches at its ends; it rests on plainly formed concrete abutments and wingwalls. As indicated by an inscription sandblasted into the slab's spandrel, the bridge was constructed in 1908 by the Ideal Cement Company. County records do not indicate payments made to Ideal that year, however, and show only small-scale bridge activity in 1908. Later incorporated into U.S. Highway 34, the bridge carried relatively heavy interstate traffic until the highway was rerouted further north. It now carries intermittent local traffic in unaltered condition.

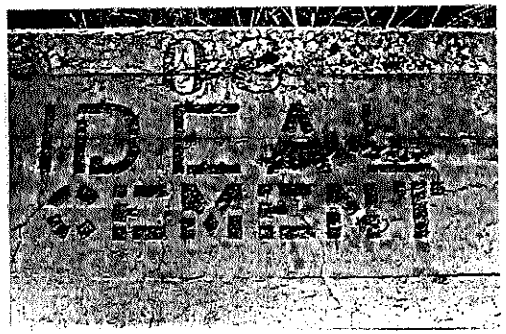
Built before the formation of the Lincoln Highway and the later transcontinental routes and before the designation of U.S. 34, this small-scale bridge represents an early, county-level effort at highway building in Nebraska. Its 1908 construction date distinguishes it as the earliest documented example of concrete bridge construction in the state. Despite its diminutive size and simple detailing, the bridge is a historically significant early remanent of Nebraska transportation.

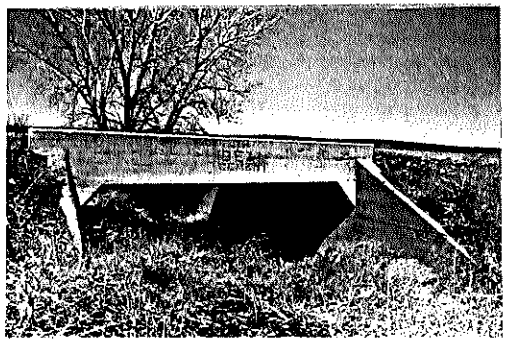
NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C004402805P; "General Highway and Transportation Map: Hitchcock County," Nebraska Department of Roads and Irrigation, 1937; Hitchcock County Commissioners' Record, 1907-1910, located at Hitchcock County Courthouse, Trenton, Nebraska; field inspection by Clayton Fraser, 28 March 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Grand Rapids State Aid Bridge HOLT01
NDOR: C004521725

DATE(S) OF CONSTRUCTION
1931

LOCATION
county road over the Niobrara River; S4/5/8/9, T33N, R15W
7.6 miles south of Naper; Holt County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 51)

CONDITION
good

OWNER
Holt County

span number:	7	superstructure:	steel transverse joist through girder
span length:	50.0'	substructure:	concrete abutments and piers
total length:	353.0'	floor/decking:	timber deck with steel wearing plates over steel stringers
roadway wdt.:	16.0'	other features:	lattice guardrail

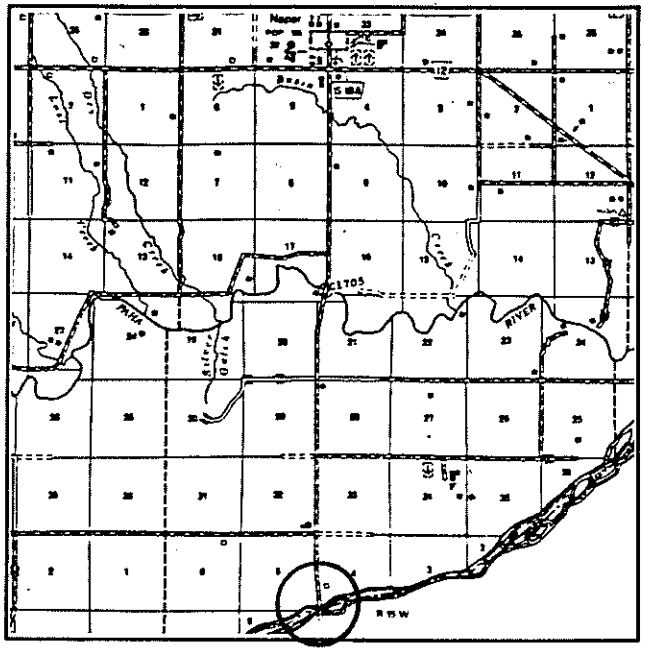
On December 18, 1925, the commissioners of Boyd and Holt counties applied jointly to the Nebraska Department of Public Works for state aid assistance in building a major bridge over the Niobrara River between Naper and Stuart. Named the Grand Rapids Bridge, this structure was designed by the state bureau of roads and bridges early in 1931, and a construction contract was awarded under Project No. SAB 864. The Grand Rapids Bridge consisted of seven transverse joist girder spans, supported by concrete abutments and piers. Since its completion later in 1931, the structure has carried vehicular traffic with only minor maintenance-related alteration.

The transverse joist girder configuration was reportedly developed by Robert Zale Drake, proprietor of the Standard Bridge Company of Omaha. The Nebraska state engineer adopted the bridge type as early as 1917 and used it extensively throughout the 1920s for both large and small crossings. The design lent itself particularly well to the multiple-span state aid bridges, and the bureau of roads designed and built almost thirty transverse joist girder state aid bridges before superseding the design with steel stringer structures in the early 1930s. All but three of the transverse joist girder state aid bridges (others: **HOWA02, LINC03**) have been subsequently replaced. The Grand Rapids State Aid Bridge is one of the few remaining such structures that retains a high degree of structural integrity. It is significant for its representation of the state aid program, as a regionally important crossing of the Niobrara River, and as an excellent and well-preserved example of this indigenous structural type.

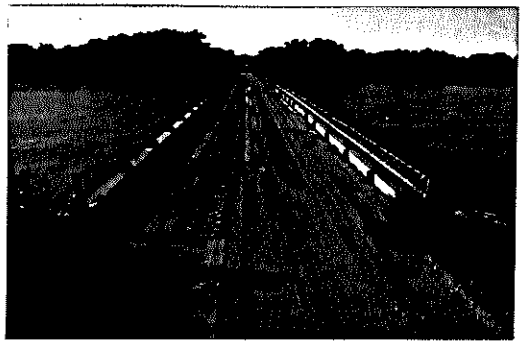
NAME(S) OF STRUCTURE

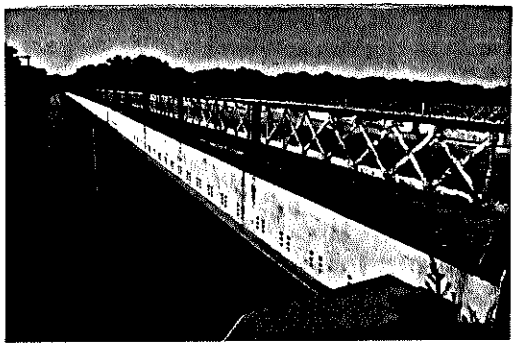
Grand Rapids State Aid Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C004521725; Boyd County Commissioners' Record, Book 3: 18 March 1929 (page 425), 15 June 1931 (page 551), located at Boyd County Courthouse, Butte, Nebraska; Department of Public Works, Eighteenth Biennial Report, 1929-30, pages 133, 141; Aivars G. Ronis, "Nebraska State Aid Bridges," typewritten report by Nebraska Department of Roads, September 1971, revised 1978, n.p.; field inspection by Clayton Fraser, 6 August 1990.

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
West Seneca Bridge [Middle Loup River Bridge] HOOK01
NDOR: C004605705P

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over the Middle Loup River; S23, T24N, R31W
1.3 miles west of Seneca; Hooker County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 29)

CONDITION
fair

OWNER
Hooker County

span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt pony truss
span length:	50.0'	substructure:	timber pile bent abutments and wingwalls
total length:	50.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	16.1'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 round bars with turnbuckles; lateral bracing: round bar with threaded ends; floor beam: I-beam, field bolted to vertical; guardrail: none; endpost-mounted builder's plate: **Built by the Western Bridge & Construction Co. Omaha Neb.**

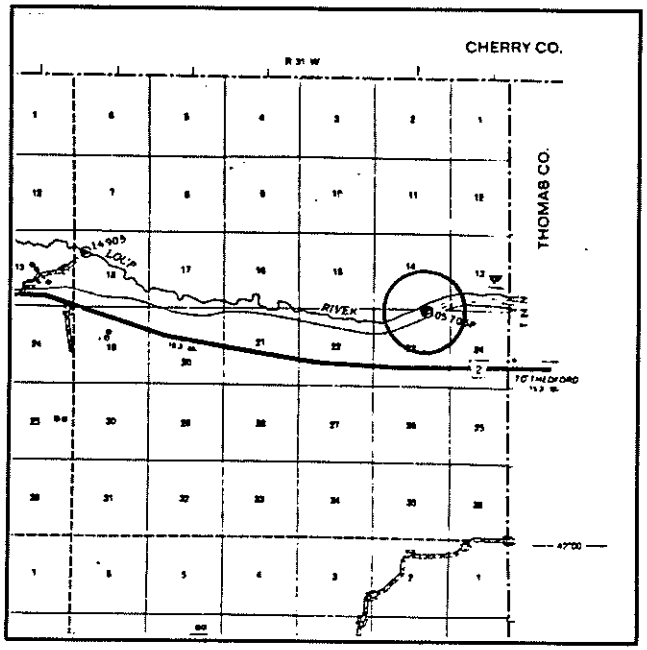
Situated immediately west of the railroad community of Seneca, this small-scale bridge carries a gravel-surfaced county road over the Middle Loup River in extreme eastern Hooker County. The structure consists of a single-span pinned Pratt pony, built by the Western Bridge and Construction Company of Omaha from steel components rolled by the Cambria mills in Pittsburgh. Unrecorded in county records, the truss appears to have been erected around 1910, based upon its detailing and dimensions. The truss itself remains intact, although the substructure appears to have been replaced entirely.

The West Seneca Bridge is a typical example of an extremely common structural type in Nebraska. Located on a secondary county road over a relatively minor crossing of the Middle Loup River, it appears to lack any appreciable level of historical or technological significance.

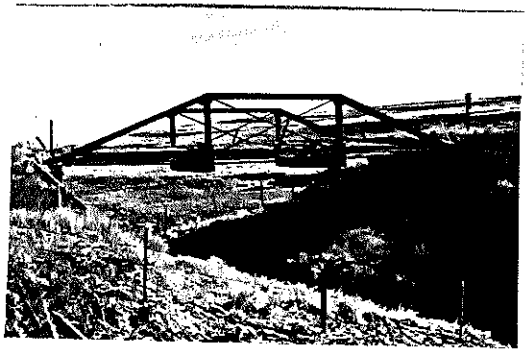
NAME(S) OF STRUCTURE

West Seneca Bridge [Middle Loup River Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C004605705P; field inspection by Clayton Fraser, 27 April 1990.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Middle Loup River Bridge
NDOR: C004614905

HOOK02

DATE(S) OF CONSTRUCTION
ca.1905

LOCATION
county road over the Middle Loup River; S18, T24N, R31W
4.6 miles northeast of Mullen; Hooker County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 17)

CONDITION
fair

OWNER
Hooker County

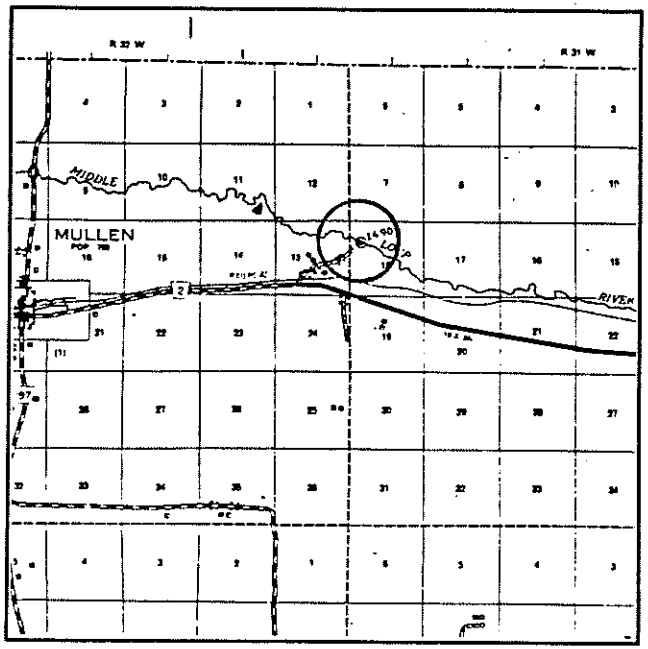
span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt half-hip pony truss
span length:	60.0'	substructure:	timber pile abutments and wingwalls
total length:	60.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	16.0'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars; vertical: 4 angles with batten plates; diagonal: 2 looped square eyebars; counter: 1 round eyebar with turnbuckle; lateral bracing: round bar with threaded ends; floor beam: I-beam, U-bolted to vertical; guardrail: lattice

The Middle Loup River Bridge is a four-panel, pinned Pratt half-hip pony truss, located a little less than five miles northeast of Mullen in sparsely settled eastern Hooker County. Steel for the structure was rolled by the Carnegie Steel Company of Pittsburgh. With no builder's plate and no county records that mention this structure specifically, its history is largely undocumented. Based on its detailing and dimensions, the truss appears to have been fabricated circa 1905. The superstructure retains a relatively high degree of physical integrity, although the timber pile abutments and wingwalls appear to have been replaced at some point.

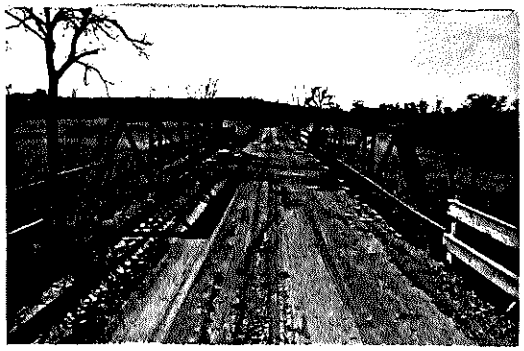
The Middle Loup River Bridge is one of thousands of such small-scale, pinned pony trusses erected across Nebraska in the early 1900s. Located on a secondary county road, it has played only a marginal role in the development of western Nebraska transportation.

NAME(S) OF STRUCTURE
Middle Loup River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C004614905; field inspection by Clayton Fraser, 27 April 1990.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Oak Creek Bridge HOWA01
NDOR: C004700115

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
county highway over Oak Creek; S6, T14N, R12W
6 miles west, 0.5 miles south of Farwell; Howard County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 22)

CONDITION
good

OWNER
Howard County

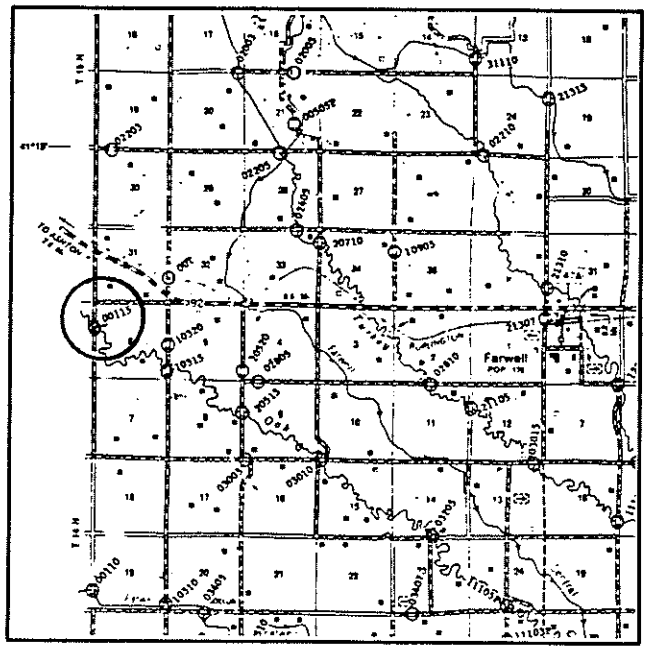
span number:	1	superstructure:	steel, five-panel, pin- / rigid-connected Pratt pony truss
span length:	70.0'	substructure:	steel pile bent abutments with steel sheet piling back- and wingwalls
total length:	72.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	16.0'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: 2 looped eyebars; vertical: 4 angles with battens; diagonal: 2 looped eyebars; counter: 2 circular-section eyerods with turnbuckles; bottom lateral: cross-braced circular-section eyerods; sway bracing: solid plate knee bracing; floor beam: I-beam, riveted to angles which are bolted to channel-section hanger plates; railing: lattice

This small-scale truss carries a county road over Oak Creek on the Howard/Sherman county line. The bridge consists of a single-span pinned Pratt pony truss, supported by steel pile bent abutments. County records do not provide a construction date, however, the truss employs the distinctive pin/rigid upper chord connections of the Nebraska highway department standard design that was used widely by the counties in the mid-1910s. Except for steel plate back and wingwalls, the bridge appears to be unaltered and has a high degree of structural integrity.

With modest dimensions and standard detailing, this structure is typical of many pony trusses built in Nebraska during the 1910s.

NAME(S) OF STRUCTURE
Oak Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C004700115; Proceedings of the Howard County Commissioners, 1905-1920, located in Howard County Courthouse, St. Paul, Nebraska; field inspection by Jeffrey A. Hess, 15 April 1989.

INVENTORIED BY	AFFILIATION	DATE
Demian Hess	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Boelus State Aid Bridge
NDOR: C004700305P

HOWA02

DATE(S) OF CONSTRUCTION
1926-27

LOCATION
county highway over Middle Loup River; S29, T13N, R12W
0.7 mile south of Boelus; Howard County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING determined NRHP eligible (score: 53)

CONDITION
good

OWNER
Howard County

span number:	6	superstructure:	transverse joist through girder
span length:	60.0'	substructure:	concrete abutments and piers with upstream cutwaters
total length:	360.0'	floor/decking:	concrete over corrugated metal deck, carried by I-beam transverse joists
roadway wdt.:	16.0'	other features:	railing: lattice

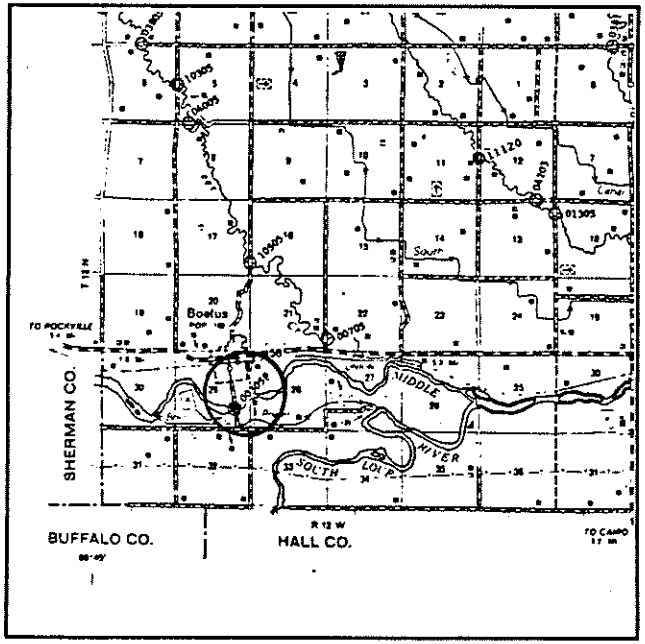
Agitation for this bridge began as early as 1910, when a "number of resident taxpayers from Boelus and vicinity appeared before the [County] Commissioners presenting the board with a liberal donation list towards building a county bridge across the Middle Loup River south of Boelus..." Although local residents had raised $1345 to build the bridge, the county board stated that it was currently obligated to pay rent to the Union Pacific Railroad for use of its bridge over the Middle Loup River near Boelus, and that "this obstacle prevents the Board from immediate construction of the bridge." Interest in a bridge on the Middle Loup River appears to have faded, and when the county's lease on the railroad bridge expired in 1912, the board renewed it for five more years. Although Howard County did apply for state aid for the Boelus crossing sometime around 1915, the commissioners later transfered the application to a bridge near St. Paul. When they re-applied for state aid on the Boelus bridge in July 1923, the state highway department designed the six-span transverse joist structure, and Howard County awarded a contract for its construction in April 1926. Completed in 1927 for a total cost of $35,208, the Boelus Bridge has carried traffic since, in essentially unaltered condition.

The transverse joist girder form was reportedly developed by Robert Zale Drake, proprietor of the Standard Bridge Company of Omaha. The Nebraska highway department adopted the bridge type as early as 1917 and used it extensively throughout the 1920s for both large and small crossings. The design lent itself particularly well to multiple-span state aid bridges, and the Nebraska highway department designed and built almost thirty transverse joist state aid bridges across the state. All but three of these (others: **HOLT01, LINC03**) have been subsequently replaced or substantially altered. The Boelus State Aid Bridge is one of the few remaining such structures that retains a high degree of structural integrity. It is significant for its representation of the state aid program, as a regionally important crossing of the North Loup River, and as an excellent and well-preserved example of this indigenous structural type.

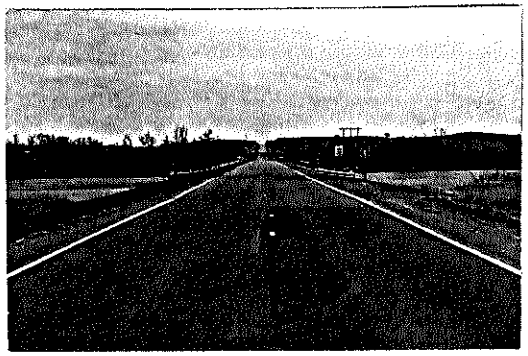
NAME(S) OF STRUCTURE

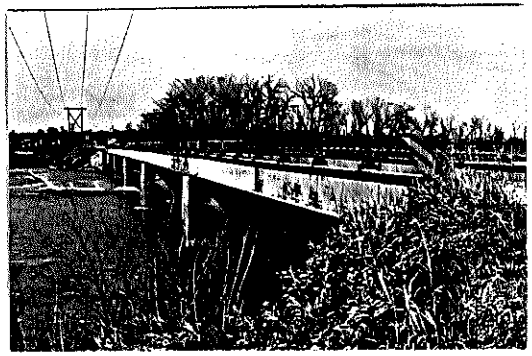
Boelus State Aid Bridge

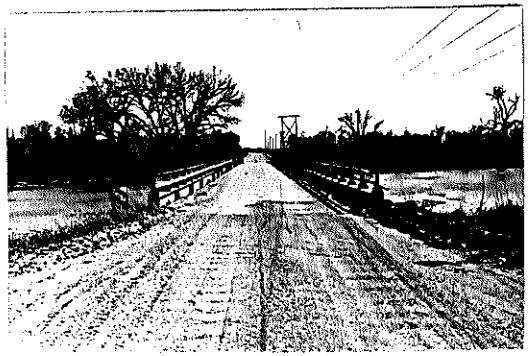
PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP







SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C004700305P; Proceedings of the Howard County Commissioners, located in Howard County Courthouse, St. Paul, Nebraska, see the following entries in Book 4: 5 September 1910 (p. 398), 3 April 1911 (pp. 422-423), 10 December 1912 (p. 504), and in Book 5: 22 June 1915 (p. 36); State of Nebraska, Department of Roads, "Nebraska State Aid Bridges," report written by Aivars G. Ronis in 1971, revised by James R. Holmes in 1978, copy on file with Nebraska Department of Roads; **Sixteenth Biennial Report of the Department of Public Works**, 1925-1926, pp. 224, 246; Ted Johnson, "A Discussion of the Transverse Joist Girder Bridge," **Nebraska Blue Print**, 26 (March 1927), 12-13; Sara Mullin Baldwin, Robert Baldwin, eds., **Nebraskana** (Hebron, Nebraska: The Baldwin Company, 1932), pp. 343-344; field inspection by Jeffrey A. Hess, 15 April 1989

INVENTORIED BY

Demian Hess

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C004701410P

HOWA03

DATE(S) OF CONSTRUCTION
1915

LOCATION
county highway over stream; S6, T15N, R9W
0.8 miles west of Cushing; Howard County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 34)

CONDITION
good

OWNER
Howard County

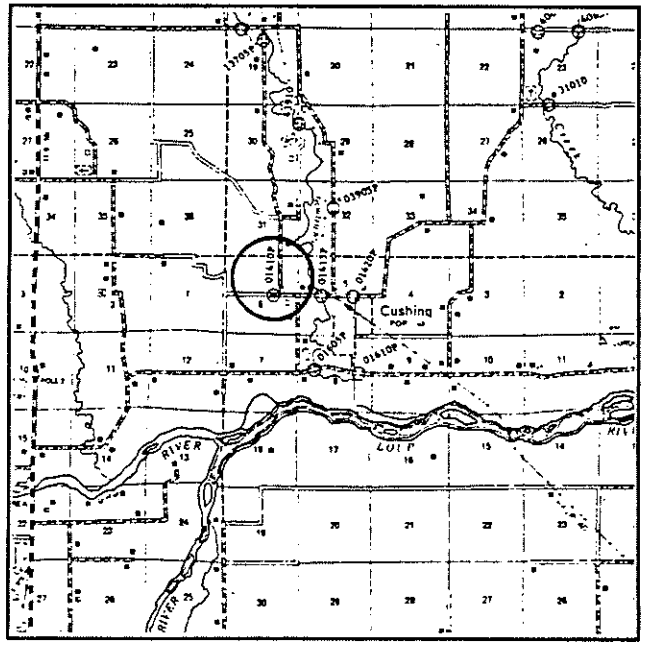
span number:	1	superstructure:	steel, 3-panel, pin- / rigid-connected Pratt pony truss
span length:	60.0'	substructure:	steel pile bent abutments with timber back and wingwalls
total length:	62.0'	floor/decking:	corrugated metal deck over I-beam stringers
roadway wdt.:	14.2'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: 2 punched eyebars; vertical: 4 angles with battens; counter: 2 square-section looped eyerods with turnbuckles; bottom lateral: cross-braced circular-section eyerods; floor beam: I-beam bolted to angles which are fastened to channel-section hanger plates; capacity plate: **Capacity of Bridge, 15 Tons**; railing: channel rails on angle posts

Situated less than a mile west of the small town of Cushing, this pinned Pratt pony truss carries a gravel-surfaced road over an intermittent stream. The county dates the structure to 1915, apparently drawn from builder's plates, which have since been removed. While county records do not make specific reference to this bridge, they indicate that the annual bridge contract was awarded in 1915 to the Elkhart Bridge and Iron Company of Elkhart, Indiana. Fabricated from steel rolled by the Illinois Steel Company, based on standard plans developed by the state highway department, the bridge appears to be unaltered and has a high degree of physical integrity.

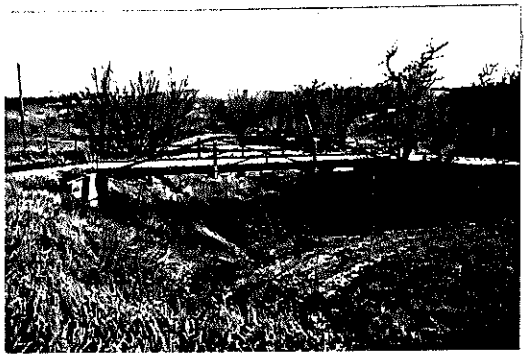
This structure is typical of many standard-plan pony trusses built in Nebraska during the 1910s.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C004701410P; Proceedings of the Howard County Commissioners, located in Howard County Courthouse, St. Paul, Nebraska, see entry dated 3 February 1915, (Book 5, p. 18); field inspection by Jeffrey A. Hess, 15 April 1989

INVENTORIED BY	AFFILIATION	DATE
Demian Hess	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C004701605

HOWA04

DATE(S) OF CONSTRUCTION
1967

LOCATION
county highway over ravine; S2/11, T15N, R12W
0.3 miles north, 4.4 miles west of Elba; Howard County, Nebraska

USE (ORIGINAL / CURRENT)
overhead crane / roadway bridge

RATING NRHP non-eligible (score: 27)

CONDITION
good

OWNER
Howard County

span number:	1	superstructure:	steel, built-up girder with parabolic lower chord
span length:	55.0'	substructure:	steel pile abutments with timber back and wingwalls
total length:	56.0'	floor/decking:	corrugated metal deck carried by transverse I-beam joists
roadway wdt.:	20.0'	other features:	bottom lateral: cross-braced, circular-section eyerods; builder's plate: **Whiting Foundry Equipment Co., Chicago, Ill. USA, Capacity 40,000**

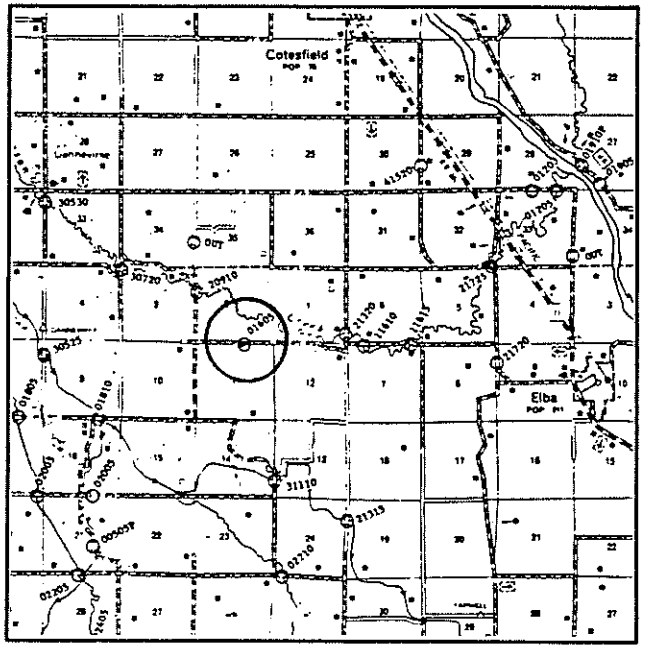
The Whiting Foundry and Equipment Company of Chicago originally fabricated the parabolic girders of this structure for use in an overhead crane. The crane was first installed in a Union Pacific Railroad roundhouse, either in North Platte or Grand Island, Nebraska. After the roundhouse was demolished, George O'Brien, proprietor of the Island Welding Supply Company of Grand Island, acquired the crane for use in his shop, although he never installed it. In 1967 O'Brien apparently learned through his good friend Frank Comstock, who was a Howard County Commissioner, that the county needed a new bridge. O'Brien seems to have offered to build the bridge using the crane girders, and the county contracted Island Welding Supply for the job. An earlier bridge is still visible beneath the girder span, and was probably the original crossing. The bridge is unaltered and appears to have good integrity.

The bridge's construction is unique and it is a good example of adaptive reuse. However, the structure does not meet minimum age requirements and is not eligible for the National Register.

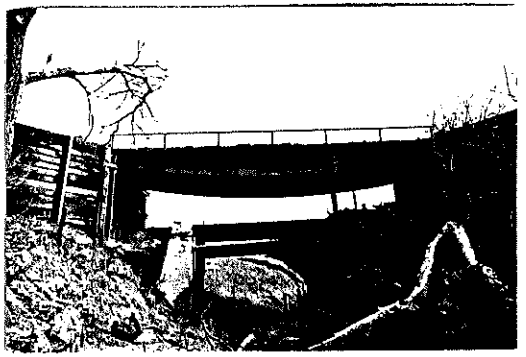
NAME(S) OF STRUCTURE

Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C004701605; Jeffrey A. Hess, personal interview with George P. O'Brien, Jr., 28 April 1989; Jeffrey A. Hess, personal interview with Leonard Mostak, Howard County Highway Commissioner, 18 April 1989; field inspection by Jeffrey A. Hess, 15 April 1989

INVENTORIED BY	AFFILIATION	DATE
Demian Hess	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Middle Loup River Bridge
NDOR: S011 02748

HOWA05

DATE(S) OF CONSTRUCTION
1934

LOCATION
State Highway 11 over the Middle Loup River; S29/30, T13N, R11W
4.7 miles southwest of Dannebrog; Howard County, Nebraska

USE (ORIGINAL / CURRENT)
highway bridge / highway bridge

RATING determined NRHP eligible (score: 49)

CONDITION
excellent

OWNER
State of Nebraska

span number:	7	superstructure:	steel cantilevered stringer
span length:	115.0'	substructure:	concrete abutments and solid concrete piers
total length:	681.0'	floor/decking:	concrete deck
roadway wdt.:	21.0'	other features:	concrete curbs with steel guardrails

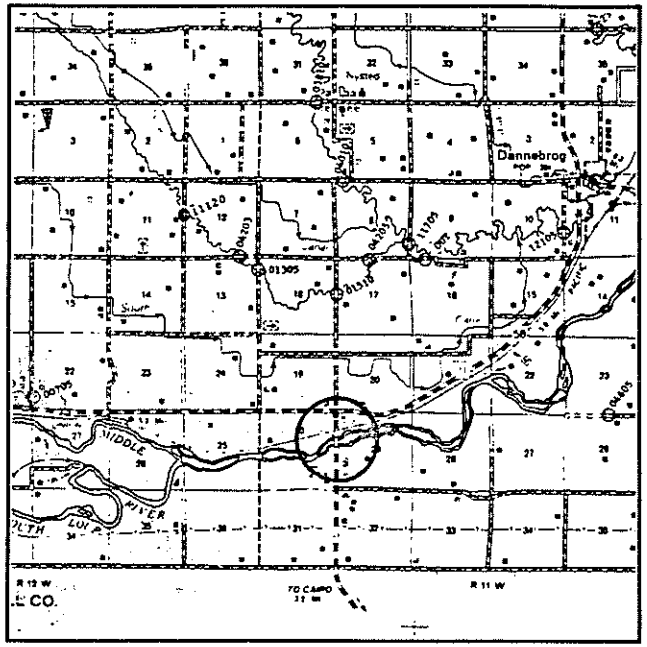
This multiple-span structure carries State Highway 11 over the Middle Loup River in Howard County, a few miles southwest of Dannebrog. The bridge consists of seven deck steel girder spans (75-foot, continuous; 105-foot, suspended; 105-foot, continuous; 115-foot, suspended; 105-foot, continuous; 105-foot, suspended; 75-foot, continuous), with an overall length of approximately 681-feet. The state highway department constructed the Middle Loup River Bridge in 1934. Designed by Joseph Sorkin of the department, the bridge demonstrated the potentials of cantilever construction. By suspending spans between cantilevered girders, it was possible to build much longer spans, thus reducing the number of piers and their associated cost. The state first experimented with cantilever construction in 1932, with the completion of the Chapman State Aid Bridge over the Platte River. The largest clear span on this structure, however, was only 64 feet, not a remarkable increase over traditional girder construction, which could usually create 60-foot spans. The Loup River Bridge, however, effectively demonstrated the "further progress being made in the development of the deck steel girder cantilever type of multiple span bridge." With a clear central span of 115 feet, it was reportedly "the longest deck steel girder highway bridge span constructed of standard rolled beams... in the United States." The structure demonstrated the state's commitment to the new technology, and the state engineer was pleased to report that "the cost of foundations and substructure is low [in this bridge] because of the elimination of certain piers." The bridge was built by the Norfolk Bridge and Construction Company, and fabricated by the Omaha Steel Works. The final cost, according to Sorkin, was $80/foot, or approximately $54,320. The bridge appears to be unaltered, and has retained a high degree of structural integrity.

The Loup River Bridge is significant for its notable engineering and its role in establishing the potential of cantilever, deck girder construction.

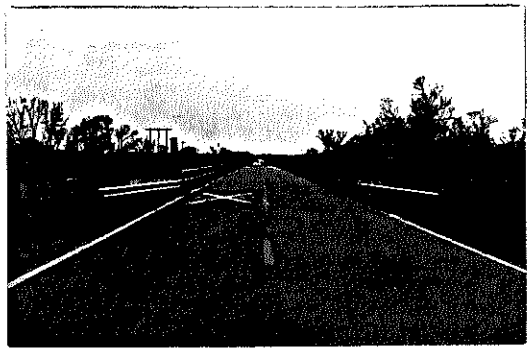
NAME(S) OF STRUCTURE

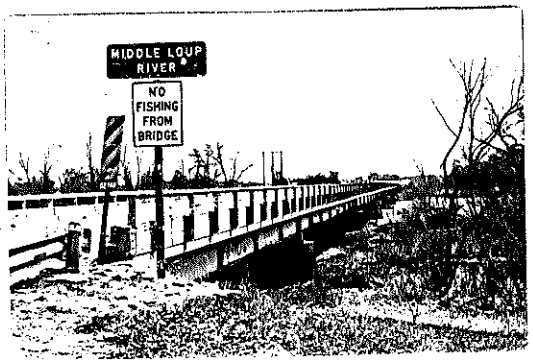
Middle Loup River Bridge

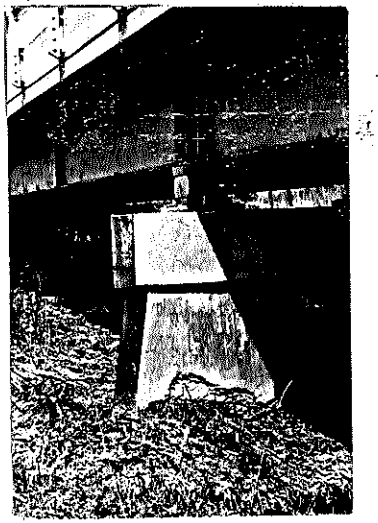
PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP







SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number S011 02748; **Twentieth Biennial Report of the Department of Roads and Irrigation**, 1933-1934, pp. 35, 88-89, 115; Joseph Sorkin, "Design of Highway I-Beam Bridges; Simple, Continuous and Cantilever Spans," Civil Engineering Thesis, University of Nebraska, 1936, pp. 177-183; State of Nebraska, "679' Multiple Deck Steel Girder Span," 7 February 1934, plan number 357-D-E-2, located in Bridge Division, Nebraska Department of Roads, Lincoln, Nebraska; field inspection by Jeffrey A. Hess, 15 April 1989

INVENTORIED BY

Demian Hess

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Mill Street Bridge
NDOR: U0665E2105

HOWA06

DATE(S) OF CONSTRUCTION
1913-14

LOCATION
Mill Street over Oak Creek; S2, T13N, R11W
Town of Dannebrog; Howard County, Nebraska

USE (ORIGINAL / CURRENT)
city street bridge / city street bridge

RATING NRHP non-eligible (score: 18)

CONDITION
good

OWNER
Town of Dannebrog

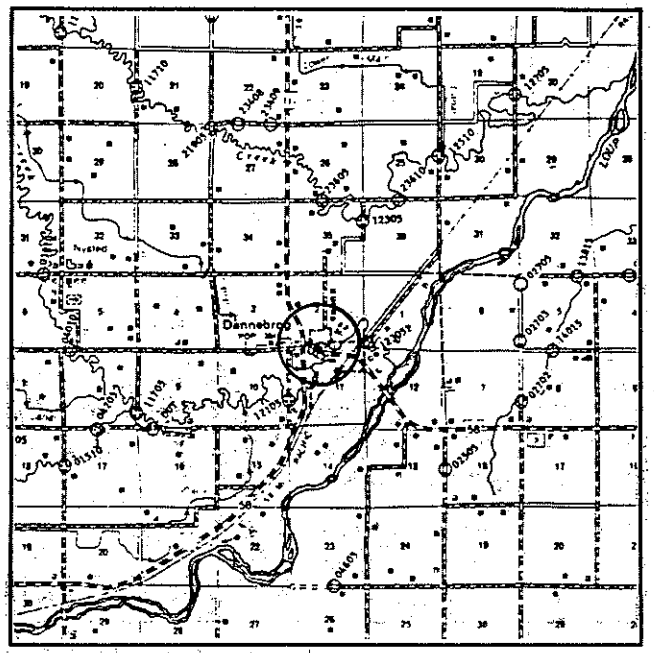
span number:	1	superstructure:	steel, 5-panel, pin-connected Pratt pony truss
span length:	70.0'	substructure:	steel piling encased in concrete abutments and flared, sloped wingwalls
total length:	70.0'	floor/decking:	concrete over corrugated metal deck, carried by I-beam stringers
roadway wdt.:	16.0'	other features:	upper chord: back-to-back channels with cover plate and battens; bottom chord: 2 punched eyebars; vertical: 4 angles with lacing; diagonal: 2 square-section looped eyerods; counter: 2 circular-section eyerods with turnbuckles; floor beam: I-beam connected to the superstructure by U-bolts hung over lower pin; railing: flexible metal barricade

On September 1913, according to county records,"a committee of four from Dannebrog... appeared before the [County] Board, asking for county aid to build a bridge in the Town of Dannebrog on Oak Creek." The county commissioners agreed to split the cost of the bridge with the town, estimating its total expense at $1600. The records do not provide any more information, however, and it is assumed that this pin-connected pony truss was constructed soon thereafter. A number of alterations have been made to the structure, most notably the addition of a pedestrian walkway along the west elevation. Due to these alterations, the bridge has only a fair degree of integrity.

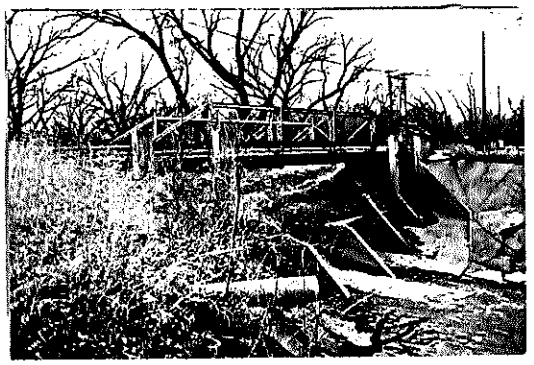
This structure is typical of many pony trusses built in Nebraska during the 1910s. However, due to alterations, the bridge lacks integrity and is not eligible for the National Register.

NAME(S) OF STRUCTURE
Mill Street Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number U0665E2105; Proceedings of the Howard County Commissioners, located in Howard County Courthouse, St. Paul, Nebraska, see entry dated 9 September 1913 (Book 4, pp. 545-6); field inspection by Jeffrey A. Hess, 15 April 1989

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Culvert JEFF01
NDOR: C004801105

DATE(S) OF CONSTRUCTION
ca.1935

LOCATION
county road over intermittent stream; S25/26, T1N, R1E
3 miles east, 2.2 miles south of Reynolds; Jefferson County, Nebraska

USE (ORIGINAL / CURRENT)
roadway culvert / roadway culvert

RATING NRHP non-eligible (score: 21)

CONDITION
good

OWNER
Jefferson County

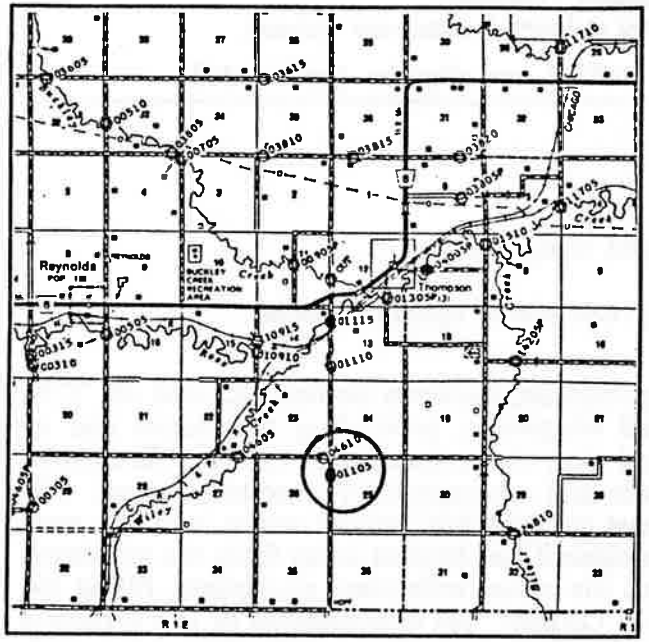
span number:	3	superstructure:	coursed rubble, stone arch culvert
span length:	8.0'	substructure:	stone abutments and piers with flared, sloped wingwalls
total length:	36.0'	floor/decking:	gravel over earth fill
roadway wdt.:	22.1'	other features:	railing: stone parapet with concrete coping rises above spandrel walls

This three-barrel culvert carries a gravel-surfaced county road over a small stream in Buckley Precinct, between Sections 25 and 26, T1N, R1E. The structure consists of three coursed rubble, stone arch spans with flared, sloped wingwalls, protruding ringstones and an enlarged keystone. Approximately 8 stone courses are visible at the base of the abutments and pier; above that point, the vault is covered by a concrete sheath displaying formwork impressions. Parapets rise from the spandrel walls and are capped by concrete coping. The integrity of the bridge is very poor due to extensive alterations and deterioration. The east parapet has broken away, and the west parapet is crumbling. The northernmost arch is completely below grade, and the northeast wingwall has broken away from the structure. In 1981, the Jefferson County Highway engineer lined the outer edges of the intrados of all the spans with steel multiplate, filling the space between the plate and the vault with concrete. Stone construction is rare in Jefferson County. An examination of the Jefferson County Commissioners' minutes from 1890 to 1930 reveals only three references to stone bridgework, including a claim for a stone arch culvert in 1903. Despite the rarity of stone construction, field survey has located an identical 3-span stone arch bridge (**JEFF09**) 13 miles north of this structure. Based on stylistic elements such as the ornamental keystones and ringstones, both bridges appear to have been built as Depression Era work relief projects, and probably date to the mid-1930s or early 1940s.

This is structure is typical of stone arch bridges built during the Depression Era to provide jobs for the unemployed. Due to alteration and deterioration, the bridge's integrity has been compromised substantially.

NAME(S) OF STRUCTURE
Culvert

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C004801105; Demian Hess, personal interview with William Stelling, Jefferson County Assistant Highway Engineer, 20 July 1989; Jefferson County Highway Files, County Engineer's Office, Bridge Number C004801105; Proceedings of the Jefferson County Commissioners, 23 February 1890, 10 November 1899, 5 May 1903, located in Jefferson County Courthouse, Fairbury, Nebraska; field inspection by Demian Hess, 20 July 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Rose Creek Bridge JEFF02
NDOR: C004801115

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
county road over Rose Creek; S13/14, T1N, R1E
0.5 mile west and 0.5 mile south of Thompson; Jefferson County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 36)

CONDITION
good

OWNER
Jefferson County

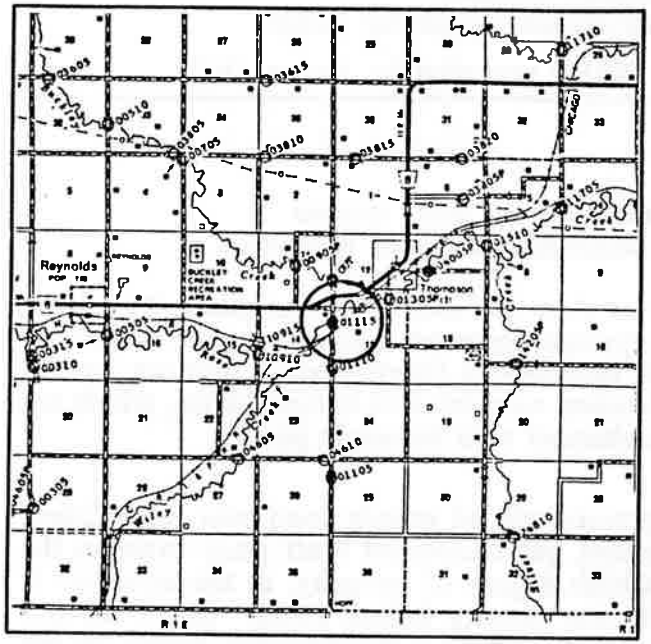
span number:	2	superstructure:	steel, 3-panel and 5-panel, pin- / rigid-connected Pratt pony trusses
span length:	80.0'; 40.0'	substructure:	steel pile bent abutments and pier, timber backwall and flared wingwalls
total length:	122.0'	floor/decking:	steel plate deck over steel stringers
roadway wdt.:	15.5'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: 2 eyebars; vertical: 4 angles with battens; diagonal: 2 eyebars; counter: 1 square eyerod with turnbuckle (south span), 2 square eyerods with turnbuckles (north span); bottom lateral: cross-braced circular eyerods; floor beam: I-beam, connected to hanger plates, which are then riveted to bottom of vertical; railing: channel rails on angle posts

Located in Buckley Precinct between Sections 13 and 14, T1N, R1E, this bridge carries a gravel-surfaced county road over Rose Creek. The structure consists of a 3-panel, pin-connected Pratt pony truss on the north, and a 5-panel, pin-connected Pratt pony truss on the south. The webs of both trusses are nearly identical in construction. The bridge retains a high degree of integrity, as the structure is in good condition and shows no signs of alteration. All-metal bridges were rare in Jefferson County before 1908. Based on this structure's 16-foot roadway and pinned/rigid-connected construction, it was probably built ca.1915 from a standardized design by the Nebraska State Engineer. The structure was probably constructed by the Standard Bridge Company of Omaha, Nebraska, which built most of the county's steel and wooden bridges from 1907 to 1928.

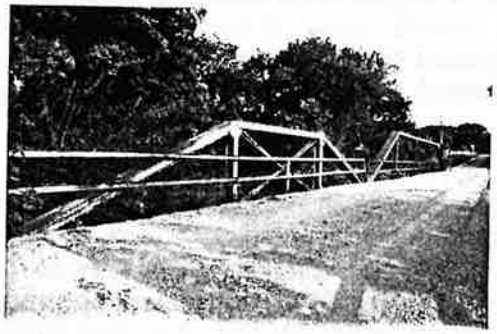
This structure is typical of many small pony trusses built in Nebraska during the 1910s.

NAME(S) OF STRUCTURE
Rose Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C004801115; Proceedings of the Jefferson County Commissioners, 1907-1928, located in Jefferson County Courthouse, Fairbury, Nebraska; field inspection by Demian Hess, 20 July 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Culvert JEFF03
NDOR: C004803325

DATE(S) OF CONSTRUCTION
ca.1935

LOCATION
county road over intermittent stream; S34/35, T4N, R3E
4 miles west and 2.1 miles south of Plymouth; Jefferson County, Nebraska

USE (ORIGINAL / CURRENT)
roadway culvert / roadway culvert

RATING NRHP non-eligible (score: 19)

CONDITION
good

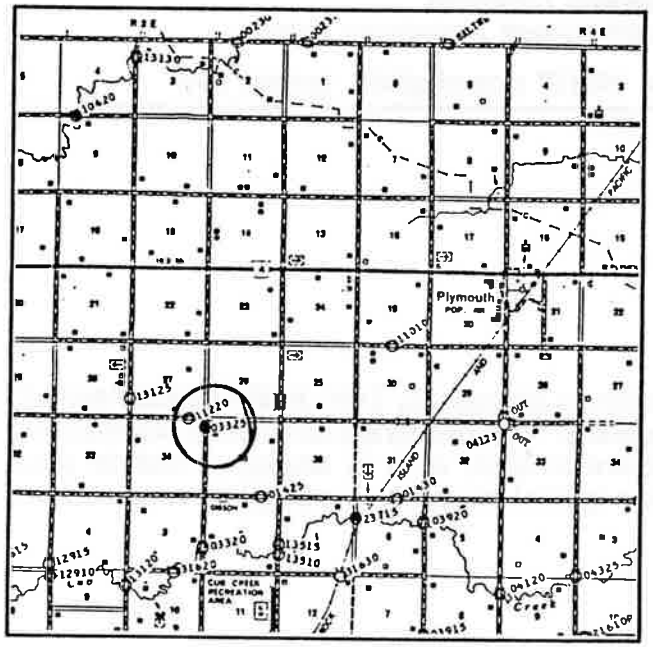
OWNER
Jefferson County

span number:	2	superstructure:	steel multiplate arch culvert
span length:	12.0'	substructure:	concrete abutments and flared wingwalls
total length:	31.0'	floor/decking:	gravel over earth fill
roadway wdt.:	unknown	other features:	railing: angle rails and posts

This two-barrel culvert carries a gravel-surfaced county road over a small stream between Sections 34 and 35, T4N, R3E, Gibson Precinct. The structure consists of two steel multiplate arches with concrete headwalls and flared wingwalls. The headwalls rise above the roadway to form curbs, and the culvert is enclosed by angle railings. The integrity of the structure is high, as it is unaltered and in good condition. Based on its multiplate construction, the culvert probably dates to ca.1935. It is a typical example of multiplate construction.

NAME(S) OF STRUCTURE
Culvert

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C004803325; Proceedings of the Jefferson County Commissioners, 1915, 1920-1929, located in Jefferson County Courthouse, Fairbury, Nebraska; field inspection by Jeffrey A. Hess and Demian Hess, 15 July 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Rose Creek Bridge
NDOR: C004804005P

JEFF04

DATE(S) OF CONSTRUCTION
ca.1908

LOCATION
county road over Rose Creek; S7, T1N, R2E
0.2 mile east of Thompson; Jefferson County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 35)

CONDITION
good

OWNER
Jefferson County

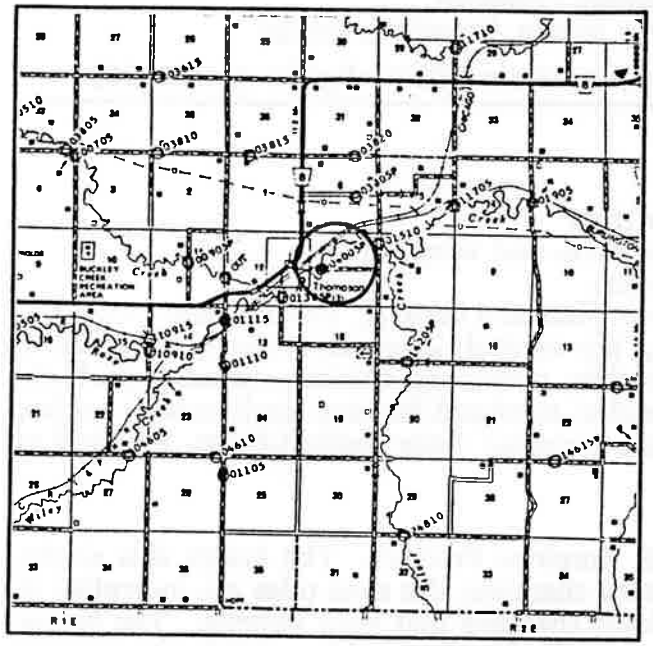
span number:	1	superstructure:	steel, 5-panel, pin-connected Pratt through truss
span length:	90.0'	substructure:	riveted steel H-pile bent abutments; timber back- and wingwalls
total length:	90.0'	floor/decking:	double-layer timber deck over I-beam stringers
roadway wdt.:	15.8'	other features:	upper chord: back-to-back channels with cover plate and battens; lower chord: 2 eyebars; vertical: back-to-back channels with lacing; hip vertical: 2 square eyerods; diagonal: 2 eyebars; counter: square eyerod with turnbuckle; portal: top and bottom struts are back-to-back angles, all other bracing is single angles; overhead bracing: back-to-back angles; top and bottom laterals: cross-braced circular eyerods; floor beam: I-beam, U-bolted to superstructure; railing: steel cable

This bridge carries a gravel-surfaced county road over Rose Creek in Section 7, T1N, R3E, Antelope Precinct. The bridge is a single-span, pinned Pratt through truss, resting on steel H-pile bent abutments. Composed of riveted channels, the steel piles are indicative of construction by the Standard Bridge Company ca.1908. The top sill consists of back-to-back channels tied with battens. The bridge retains a high degree of integrity, as the structure is in good physical condition and is unaltered. The first bridge at this site appears to have been a 40-foot, iron pony truss, built in 1890 by the Wrought Iron Bridge Company of Canton, Ohio. Based on the current structure's pinned-construction and abutments, it was constructed ca.1908 by the Standard Bridge Company of Omaha, which built most of the county's steel and wooden bridges after 1907.

Robert Zale Drake, proprietor of the Standard Bridge Company, reportedly developed a new steel pile bent configuration for bridge substructures around 1903. Consisting of a 5-inch channel riveted to the backs of two 8-inch channels, the built-up H-piles, as they were termed, largely replaced the use of steel cylinder piers in Nebraska, as they won overwhelming acceptance (used in 95 percent of the state's bridges, by one report) among county engineers and in-state bridge companies. The built-up piles were superseded by rolled H-sections within ten years, and over the next twenty years some 15,000 bridges were constructed in the state using variations of Drake's H-piling. Although the pinned through truss of the Rose Creek Bridge is unremarkable as a typical example of a relatively common structural type, the bridge is significant as one of the earliest and best-preserved examples remaining in the state of an original Standard Bridge Company built-up H-pile substructure.

NAME(S) OF STRUCTURE
Rose Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C004804005P; Proceedings of the Jefferson County Commissioners, 1907-1928, located in Jefferson County Courthouse, Fairbury, Nebraska; field inspection by Demian Hess, 20 July 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Culvert JEFF05
NDOR: C004810420

DATE(S) OF CONSTRUCTION
ca.1935

LOCATION
county road over intermittent stream; S4/9, T4N, R3E
2 miles north and 5.7 miles west of Plymouth; Jefferson County, Nebraska

USE (ORIGINAL / CURRENT)
roadway culvert / roadway culvert

RATING NRHP non-eligible (score: 19)

CONDITION
fair

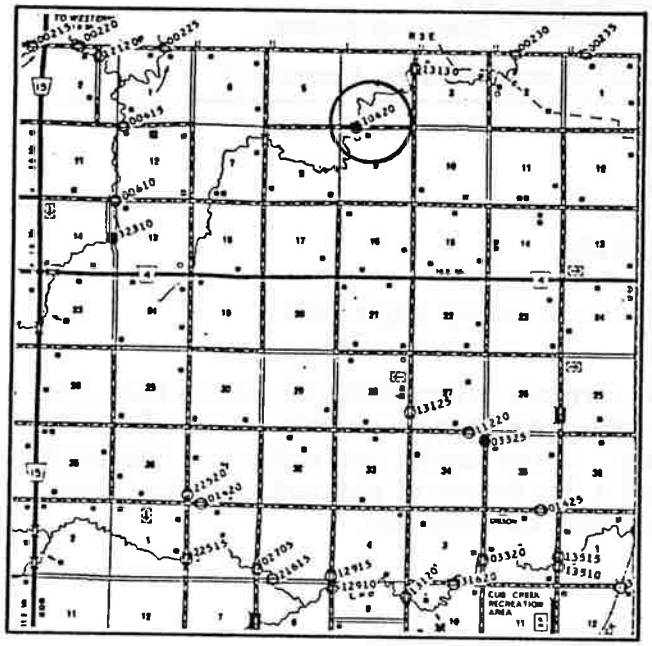
OWNER
Jefferson County

span number:	2	superstructure:	steel multiplate arch with concrete headwalls
span length:	12.0'	substructure:	concrete abutments and flared concrete wingwalls
total length:	30.0'	floor/decking:	gravel over earth fill
roadway wdt.:	21.6'	other features:	railing: parapets rise above spandrel walls, surmounted by angle rails

This two-barrel culvert is located in Gibson Precinct, between Sections 4 and 9, T4N, R3E. It carries a gravel-surfaced county road over a small stream. The structure consists of two steel multiplate arches, with concrete headwalls and flared, concrete wingwalls. The headwalls rise above the roadway to form low curbs, which are surmounted by angle rails. Large cracks are visible on the north elevation, and the south curb is cracked and broken. The culvert is unaltered and has retained a fair degree of physical integrity. Based on its multiplate construction, it probably dates to ca.1935. This structure is typical of multiplate construction.

NAME(S) OF STRUCTURE
Culvert

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C004810420; Proceedings of the Jefferson County Commissioners, 1914, locating in Jefferson County Courthouse, Fairbury, Nebraska; field inspection by Jeffrey A. Hess and Demian Hess, 15 July 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Elm Creek Bridge
NDOR: C004813110

JEFF06

DATE(S) OF CONSTRUCTION
unknown

LOCATION
county road over Elm Creek; S15/16, T2N, R3E
2 miles east of Fairbury; Jefferson County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 12)

CONDITION
fair

OWNER
Jefferson County

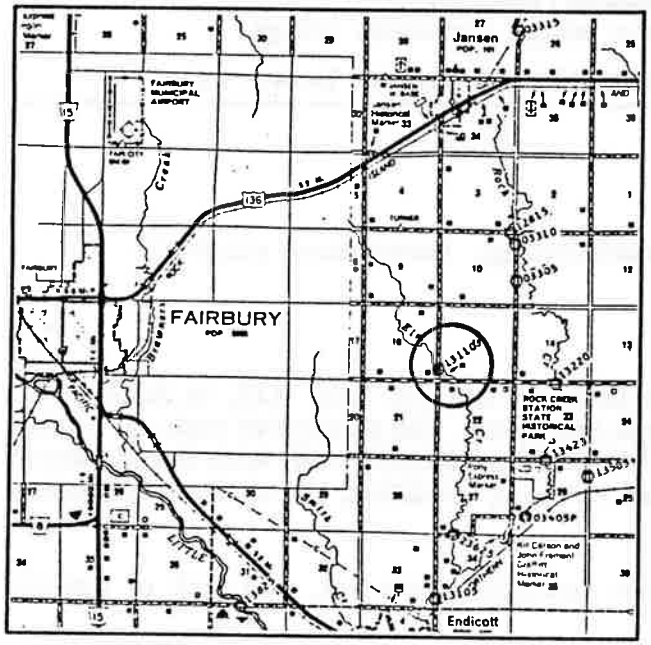
span number:	2	superstructure:	concrete slab
span length:	12.0'	substructure:	stone breastwalls and pier on concrete spread footing; flared stone wingwalls
total length:	27.0'	floor/decking:	concrete
roadway wdt.:	15.4'	other features:	simply detailed configuration and forming

This bridge carries a gravel-surfaced county road over Elm Creek on the line between sections 15 and 16, T2N, R2E, in Rock Creek Precinct. The structure consists of two concrete slabs supported by skewed stone breastwalls and piers. The stonework rests on a thick concrete slab, which underlies the entire bridge and forms a floor beneath the spans. The bridge was originally built with flared, sloped stone wingwalls, but these have broken away in all but the southwest corner. Due to its deteriorating condition, the structure possesses poor integrity.

The Elm Creek Bridge is unusual due to its stone piers and abutments. Due to its poor condition, however, and lack of historic documentation it lacks an appreciable degree of integrity and significance.

NAME(S) OF STRUCTURE
Elm Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C004813110; Proceedings of the Jefferson County Commissioners, 1914, located in Jefferson County Courthouse, Fairbury, Nebraska; field inspection by Demian Hess, 19 July 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Indian Creek Bridge
NDOR: C004813425

JEFF07

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
county road over Indian Creek; S22/27, T2N, R4E
0.2 mile north and 1.5 miles west of Diller; Jefferson County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 39)

CONDITION
good

OWNER
Jefferson County

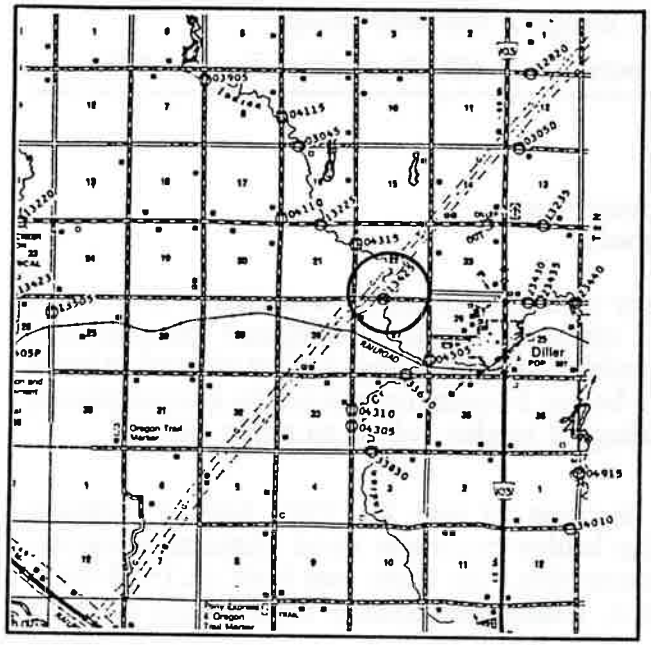
span number:	1	superstructure:	steel, 6-panel, pin- / rigid-connected Pratt pony truss
span length:	110.0'	substructure:	concrete abutments with flared, sloped wingwalls
total length:	111.0'	floor/decking:	double-layer wood deck over steel stringers
roadway wdt.:	15.4'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: 2 eyebars; vertical: 4 angles with battens; diagonal: 2 eyebars; counter: 2 square eyerods with turnbuckles; bottom lateral: cross-braced eyerods; sway bracing: angles riveted as knee bracing to the vertical and floor beam; floor beam: I-beam, connected to hanger plates, which are riveted to bottom of vertical; railing: 2 angles bolted to angle posts

This bridge carries a gravel-surfaced county road over Indian Creek on the line between Sections 22 and 27, T2N, R4E in Pleasant Precinct. It is a single-span, pinned Pratt pony truss supported by concrete abutments. The bridge possesses good physical integrity, having no major alterations. Based on its 16-foot roadway and pinned/rigid-connected construction, the truss was built ca.1915 from a standard plan by the Nebraska State Engineer, by the Standard Bridge Company of Omaha, which constructed most of the county's steel bridges after 1907.

This structure is typical of many small pony trusses built from state standard designs in the 1910s. It is distinguished as the longest pinned pony truss identified in the statewide bridge inventory.

NAME(S) OF STRUCTURE
Indian Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C004813425; Proceedings of the Jefferson County Commissioners, 1907-1928, located in Jefferson County Courthouse, Fairbury, Nebraska; field inspection by Demian Hess, 19 July 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Little Blue River Bridge
NDOR: C004814405P

JEFF08

DATE(S) OF CONSTRUCTION
1893 (?)

LOCATION
county road over the Little Blue River; S24, T1N, R3E
0.5 mile west of Steele City; Jefferson County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 21)

CONDITION
good

OWNER
Jefferson County

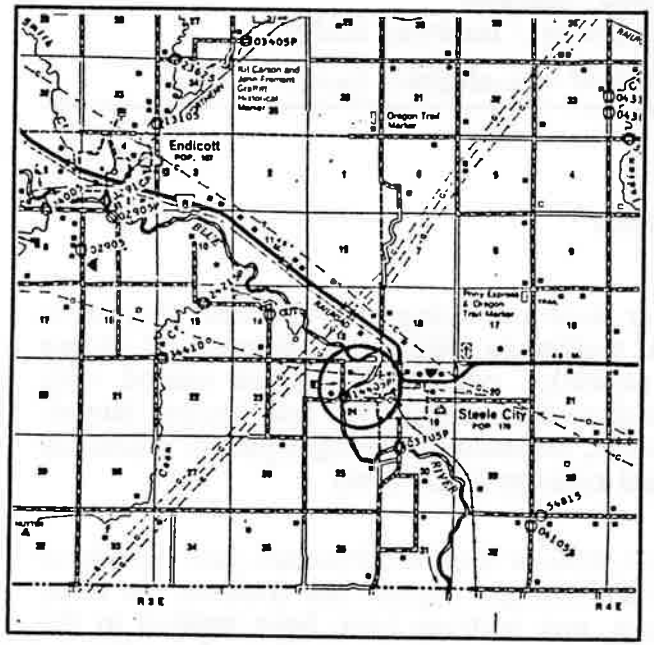
span number:	2	superstructure:	steel, 6-panel, pin-connected Pratt through truss
span length:	105.0'	substructure:	steel bent pile abutments and piers
total length:	313.0'	floor/decking:	double-layer wood deck over steel stringers
roadway wdt.:	15.4'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: 2 eyebars; vertical: box sections composed of 2 channels welded to solid plates; diagonal: 2 square eyerods (center panels), 2 eyebars (end panels); counter: 1 square eyerod with turnbuckle; portal and overhead bracing: back-to-back angles; top and bottom lateral: cross-braced circular eyerod; floor beam: I-beam, connected to hanger plates, which are riveted to bottom of vertical; railing: channel rails on angle posts

This bridge carries a gravel-surfaced county road over the Little Blue River in Section 24, T1N, R3E of Endicott Precinct, just outside of Steele City. The structure consists of two 6-panel, pinned Pratt through trusses with three steel stringer approaches (two on the west, one east). The bridge's original abutments and piers have been replaced by steel pile bents, and sections have been welded to the verticals and end posts of the trusses. Due to these alterations, the bridge has lost a great deal of its historical integrity. According to local sources, the bridge was once equipped with a builder's plate dated 1893. The plate has been removed, and no other information is recalled. Unfortunately, county records do not indicate that any truss bridges were erected in Jefferson County in 1893, and no information on the bridge has been found in any other years. It is possible that the bridge was actually constructed in another location and later moved to this site.

This structure is typical of many through trusses built in Nebraska, although it is reportedly one of the earliest to remain. However, due to extensive welding, the bridge has lost its integrity and is not eligible for the National Register.

NAME(S) OF STRUCTURE
Little Blue River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C004814405P; Proceedings of the Jefferson County Commissioners, 1893, located in Jefferson County Courthouse, Fairbury, Nebraska; field inspection by Demian Hess, 20 July 1989

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Culvert
NDOR: C004821525

JEFF09

DATE(S) OF CONSTRUCTION
1938

LOCATION
county road over intermittent stream; S17/18, T3N, R2E
2.2 miles east and 0.2 miles north of Powell; Jefferson County, Nebraska

USE (ORIGINAL / CURRENT)
roadway culvert / roadway culvert

RATING NRHP non-eligible (score: 18)

CONDITION
good

OWNER
Jefferson County

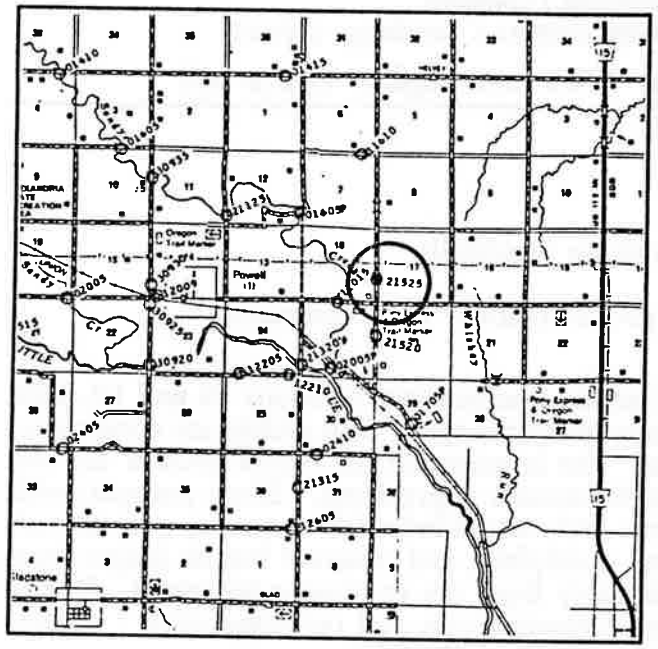
span number:	3	superstructure:	semi-coursed, rubble stone arch
span length:	8.0'	substructure:	stone abutments and piers; flared, sloped stone wingwalls
total length:	36.0'	floor/decking:	gravel over earth fill
roadway wdt.:	19.5'	other features:	stone parapet with concrete coping rises above roadway from spandrels

This culvert carries a gravel-surfaced county road over a small stream in Richland Precinct on the line between Sections 16 and 17, T3N, R2E. The structure consists of three stone arches which appear to spring from grade and have an 8-foot span. The arches are constructed of semi-coursed rubble, and have protruding ringstones and enlarged, triangular keystones. The keystone in the center arch of the east elevation is inscribed with the date "1938." The vault is sheathed in concrete which bears formwork impressions. Stone parapets with concrete coping rise above the roadway from the spandrel walls. At some time, the north arch was filled with concrete, and tie rods run transversely through the bridge. The ends of the arches have also been ringed with steel multiplate, and concrete impost ledges seem to have been added, perhaps to prevent scour. A mortared stone wall also runs perpendicularly from the northwest wingwall. Due to these alterations, the bridge has poor historical integrity. Based on its apparent date, stone construction and ornamentation - namely the enlarged keystone and projecting ringstones - the bridge was probably a Depression Era work relief project.

This structure is typical of Depression Era stone arch bridges. However, due to extensive alterations, it has lost integrity and is not eligible for the National Register.

NAME(S) OF STRUCTURE
Culvert

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C004821525; field inspection by Jeffrey A. Hess and Demian Hess, 15 July 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Cub Creek Bridge JEFF10
NDOR: C004823715

DATE(S) OF CONSTRUCTION
ca.1905

LOCATION
county road over Cub Creek; S1, T3N, R3E/S6, T3N, R4E
2 miles west and 3.5 miles south of Plymouth; Jefferson County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 19)

CONDITION
good

OWNER
Jefferson County

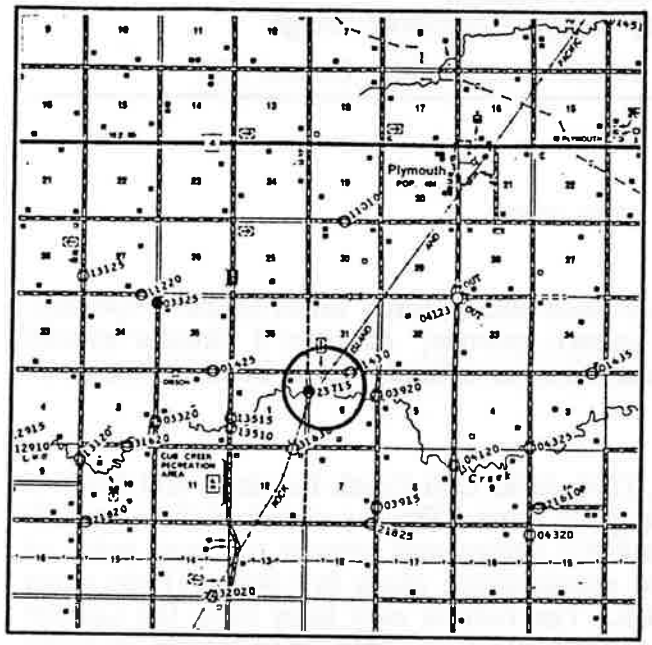
span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt half-hip pony truss
span length:	60.0'	substructure:	steel pile bent abutments
total length:	60.0'	floor/decking:	wood deck over steel stringers
roadway wdt.:	14.7'	other features:	upper chord: back-to-back channels with cover plate and battens; lower chord: 2 eyebars; vertical: 4 angles with lacing; diagonal: 2 square eyerods; counter: 1 circular eyerod with turnbuckle; bottom lateral: cross-braced circular eyerod; floor beam: I-beam, U-bolted to superstructure; railing: angle

This bridge carries an unpaved county road over Cub Creek on the line between Section 1, T3N, R3E, Cub Creek Precinct, and Section 6, T3N, R4E, Jefferson Precinct. The structure consists of a single-span, pinned Pratt half-hip pony truss. The top chord of the east web is extensively reinforced with welding, causing a loss of historical integrity. The bridge's half-hip design and narrow roadway point to an early construction date. The county began to build steel bridges in 1900, and adopted standardized plans in 1908. These plans probably did not include half-hip Pratt designs, and so this bridge probably dates to ca.1905. The builder may have been the Canton Bridge Company of Canton, Ohio, which held the annual steel bridge contract for the county from 1900 to 1903. Alternately, it could have been erected by the Standard Bridge Company of Omaha, which held Jefferson County's annual bridge contracts from 1907 through the 1920s. Both Canton and Standard marketed half-hip pony trusses extensively in the state.

This structure is typical of many half-hip Pratt pony trusses built in Nebraska in the early 1900s. Due to its loss of integrity, however, it is not eligible for the National Register.

NAME(S) OF STRUCTURE
Cub Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C004823715; Proceedings of the Jefferson County Commissioners, 1890-1908, located in Jefferson County Courthouse, Fairbury, Nebraska; field inspection by Jeffrey A. Hess and Demian Hess, 15 July 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge JEFF11
NDOR: C004832310

DATE(S) OF CONSTRUCTION
ca.1905

LOCATION
county road over intermittent stream; S13/14, T4N, R2E
9 miles west and 0.5 miles north of Plymouth; Jefferson County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 19)

CONDITION
good

OWNER
Jefferson County

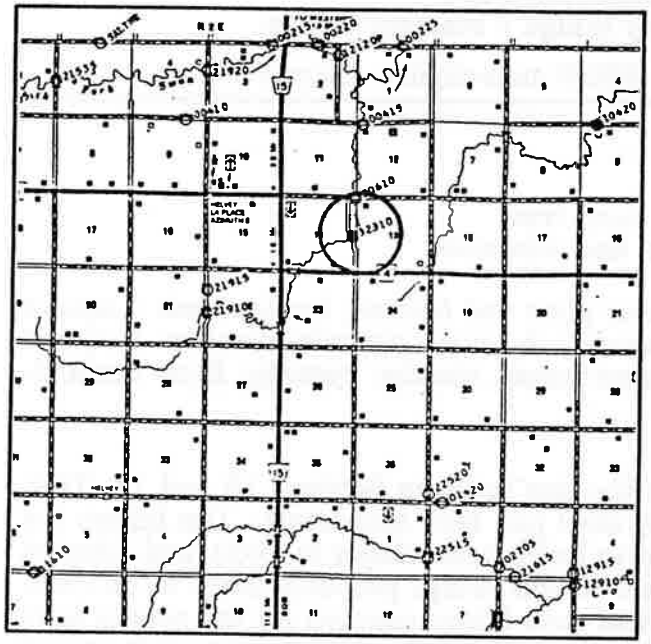
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt half-hip pony truss
span length:	40.0'	substructure:	steel pile bent abutments with timber back- and wingwalls
total length:	41.0'	floor/decking:	wood deck over steel stringers
roadway wdt.:	16.0'	other features:	upper chord: back-to-back channels with cover plate and battens; lower chord: 2 square eyerods; vertical: 4 angles with lacing; diagonal: 2 square eyerods; counter: 1 square eyerod with turnbuckle; bottom lateral: cross-braced circular eyerods; floor beam: I-beam, U-bolted to superstructure

This bridge carries an unpaved county road over a small stream in Washington Precinct on the line between Sections 13 and 14, T4N, R2E. The structure consists of a single-span, pinned Pratt half-hip pony truss, supported by steel pile bent abutments. The bridge has good historical integrity, being unaltered and in good physical condition. The county began to build steel bridges in 1900, and adopted standardized plans in 1908. These plans probably did not include half-hip Pratt designs, and so this bridge probably dates to ca.1905. The builder may have been the Canton Bridge Company of Canton, Ohio, which held the annual steel bridge contract for the county from 1900 to 1903. Alternately, it could have been erected by the Standard Bridge Company of Omaha, which held Jefferson County's annual bridge contracts from 1907 through the 1920s. Both Canton and Standard marketed half-hip pony trusses extensively in the state.

This structure is typical of many half-hip Pratt pony trusses built in Nebraska.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C004832310; Proceedings of the Jefferson County Commissioners, 1890 to 1908, located in Jefferson County Hall, Fairbury, Nebraska; field inspection by Jeffrey A. Hess and Demian Hess, 15 July 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Fairbury Viaduct [K Street Viaduct] JEFF12
NDOR: S015 00903

DATE(S) OF CONSTRUCTION
1938-39

LOCATION
State Highway 15 over Chicago, Rock Island and Pacific Railroad; S23, T2N, R2E
Fairbury; Jefferson County, Nebraska

USE (ORIGINAL / CURRENT)
highway overpass / highway overpass

RATING potentially NRHP eligible (score: 48)

CONDITION
good

OWNER
Nebraska Department of Roads

span number:	9	superstructure:	steel cantilevered stringer
span length:	102.0'	substructure:	concrete abutments with concrete back and flared wingwalls; open concrete piers
total length:	540.0'	floor/decking:	concrete deck over steel stringers
roadway wdt.:	24.0'	other features:	5-foot sidewalk and lights on west side of roadway; steel handrail

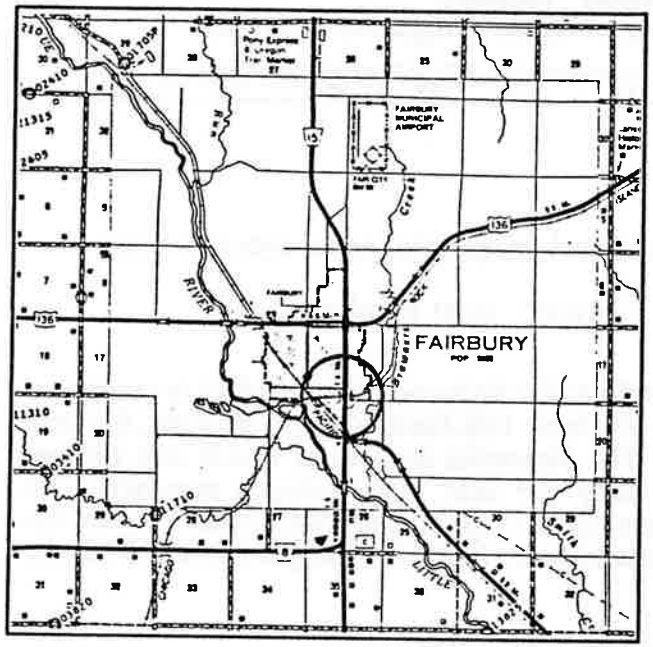
The Fairbury Viaduct carries State Highway 15 over the tracks of the Chicago, Rock Island and Pacific Railroad. The viaduct is composed of nine cantilevered steel stringer spans of the following dimensions (from south to north): 66-foot, 102-foot, 63-foot, 66-foot, 62-foot, 66-foot, 41-foot, 31.5-foot. These beams are supported by concrete abutments and piers. The Nebraska Bureau of Roads and Bridges prepared plans for the viaduct in December 1938 and undertook the construction itself early the next year, using a superstructure fabricated by the venerable Fort Pitt Bridge Works of Pittsburgh. Partially funded by a federal grade-separation grant under Project No. FAGM 21(1), the viaduct cost $119,766 (including ancillary grading and minor drainage structures). Since its completion in 1939, the Fairbury Viaduct has carried vehicular traffic in essentially unaltered condition.

This structure is typical of many grade separation projects undertaken by the State of Nebraska in the late 1930s.

NAME(S) OF STRUCTURE

Fairbury Viaduct [K Street Viaduct]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number S015 00903; Nebraska Department of Roads and Irrigation, Bureau of Roads and Bridges, **Twenty-Third Biennial Report**, 1939-40, pp. 25, 138; also refer to the following plans, held in the Bridge Division, Nebraska Department of Roads: Nebraska Department of Roads and Irrigation, Bureau of Roads and Bridges, "Fairbury Viaduct," 20 December 1938, plan number FAGM-21(1)-1; Shop Plan Number 9141, dated 1939; field inspection by Demian Hess, 15 July 1989.

INVENTORIED BY

Demian Hess

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Jansen Viaduct
NDOR: S136 15681

JEFF13

DATE(S) OF CONSTRUCTION
1936

LOCATION
U.S. Highway 136 over Chicago, Rock Island and Pacific Railroad; south edge of Jansen; Jefferson County, Nebraska

S34, T3N, R3E

USE (ORIGINAL / CURRENT)
highway overpass / highway overpass

RATING potentially NRHP eligible (score: 40)

CONDITION
good

OWNER
Nebraska Department of Roads

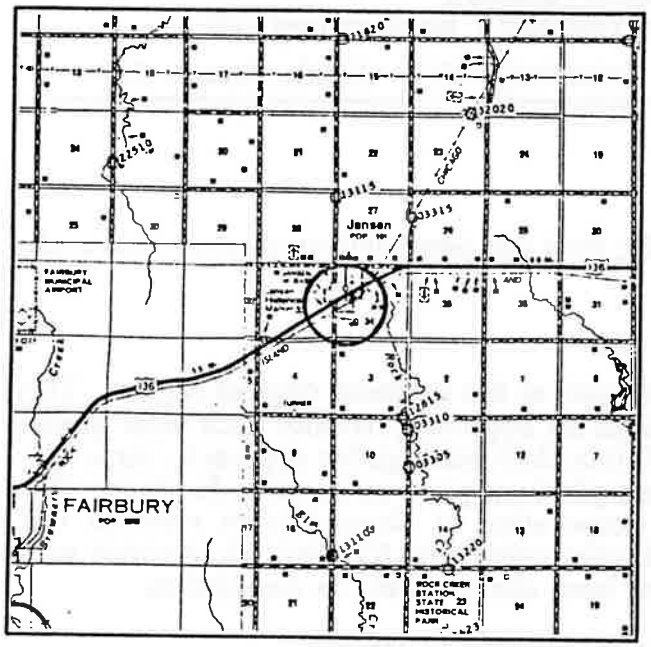
span number:	9	superstructure:	steel through girder
span length:	80.0'	substructure:	concrete abutments with back- and wingwalls; steel pile bent piers on concrete pedestals
total length:	420.0'	floor/decking:	concrete deck over steel stringers
roadway wdt.:	24.0'	other features:	angle railing on concrete curbs

The Jansen Viaduct carries State Highway 136 over the Chicago, Rock Island and Pacific Railroad at the southern edge of Jansen. The viaduct is composed of the following nine spans (from west to east): 46.5-foot deck steel girder approach; 16-foot deck steel girder approach; two 80.7-foot continuous through girders; 81-foot continuous through girder; 16-foot deck steel girder approach; three 33-foot deck steel girder approaches. The structure is supported by concrete abutments and steel pile bent piers on concrete footings. The State of Nebraska designed the Jansen Viaduct in 1936. The Western Asphalt Paving Corporation of Sioux City IA received the construction contract, and the Omaha Steel Works served as the fabricator. The total cost of construction was $17,942, all of which was drawn from a federal Works Program Grade Crossing Fund. The viaduct has apparently not been altered since its completion.

This structure is typical of many grade separation projects undertaken by the State of Nebraska in the late 1930s.

NAME(S) OF STRUCTURE
Jansen Viaduct

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number S136 15681; Nebraska Department of Roads and Irrigation, **Twenty-first Biennial Report, 1935-1936**, pp. 73, 123; also refer to the following plans in the Bridge Division, Nebraska Department of Roads: Department of Roads and Irrigation, "Jansen Viaduct," 14 March 1936, plan number WPGH-25-2; Shop Plan Number 8944, no date; field inspection by Demian Hess and Jeffrey A. Hess, 15 July 89.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Yankee Creek Bridge
NDOR: C004902215

JOHN01

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
county road over Yankee Creek; S24/25, T5N, R10E
3 miles west of Tecumseh; Johnson County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 18)

CONDITION
good

OWNER
Johnson County

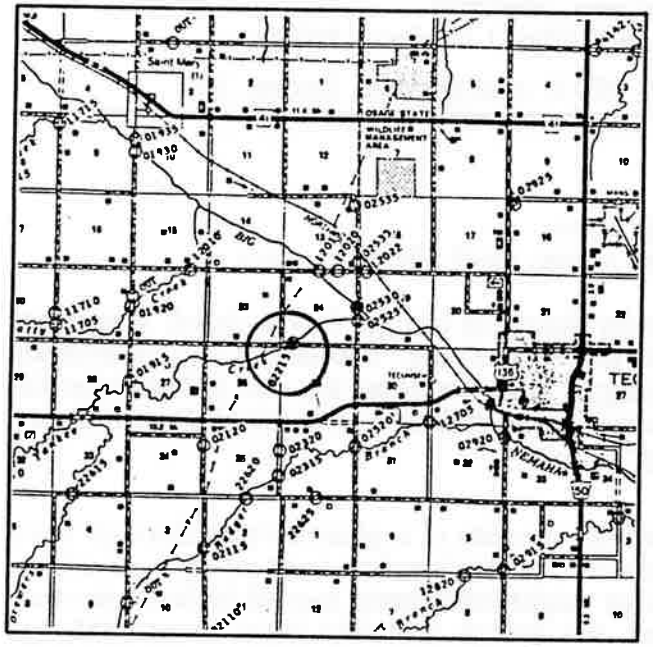
span number:	1	superstructure:	steel, 6-panel, pin-connected, Pratt through truss
span length:	125.0'	substructure:	steel pile and timber bent abutments; sheet piling; steel pile bent piers
total length:	125.0'	floor/decking:	wood deck over wood stringers
roadway wdt.:	13.2'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: 2 eyebars; vertical: 2 channels with lacing; diagonal: paired eyebars; counter: 2 square eyerods with turnbuckles; portal and overhead bracing: 2 angle sections; top and bottom laterals: cross-braced cylindrical eyerods; floor beam: I-beam, bolted to hanger plates which are riveted to the bottoms of verticals; railing: lattice

This bridge carries an unpaved county road over Yankee Creek in Nemaha Precinct. The bridge consists of a pinned Pratt through truss with one timber stringer approach span on the south. The concrete abutment of an abandoned bridge lies west of this structure, indicating that another, earlier crossing was located at this site, and that the current bridge might have been moved in from another location. Based on its narrow roadway width, pinned construction and wooden stringers, the bridge probably dates to ca.1915. It probably built by bridge contractor H.T. Ward of Tecumseh NE, who constructed almost all of the steel bridges in Johnson County from 1900 to 1923.

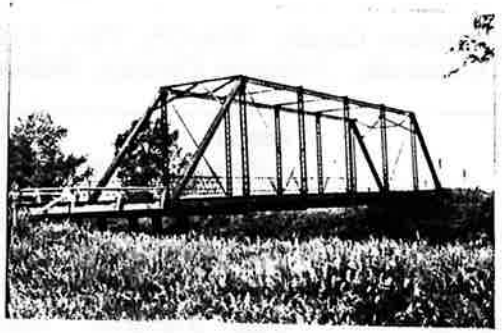
This structure is typical of many medium-span through trusses built in Nebraska during the 1910s.

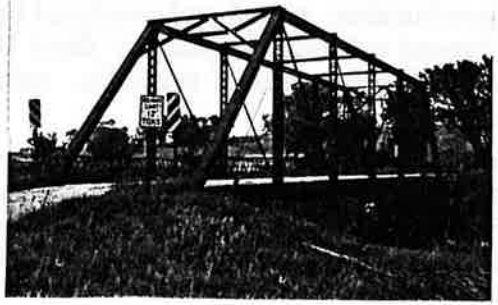
NAME(S) OF STRUCTURE
Yankee Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C004902215; field inspection by Jeffrey A. Hess and Demian Hess, 16 July 1989; Proceedings of the Johnson County Commissioners, 1900-1923, located in Johnson County Courthouse, Tecumseh, Nebraska.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Big Nemaha River Bridge JOHN02
NDOR: C004902530

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
county road over the Big Nemaha River; S24/19, T5N, R10E/11E
0.5 mile north, 2 miles west of Tecumseh; Johnson County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 30)

CONDITION
good

OWNER
Johnson County

span number: 1
span length: 90.0'
total length: 170.0'
roadway wdt.: 13.6'

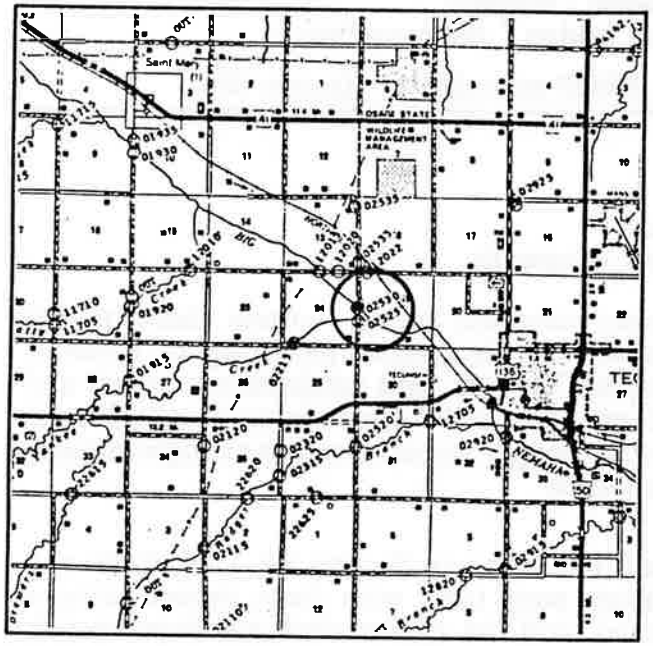
superstructure: steel, 6-panel, pin-connected Pratt pony truss
substructure: steel piling bent abutments and piers; timber wingwalls
floor/decking: timber deck over timber stringers
other features: upper chord: back-to-back channels with cover plate and lacing; bottom chord: paired eyebars; vertical: back-to-back channels with lacing; hip vertical: paired square eyerods; diagonal: paired eyebars; counter: paired square eyerods with turnbuckles; portal and overhead bracing: back-to-back angle sections; top and bottom lateral: cross-braced cylindrical eyerod; floor beam: I-beam, riveted to hanger plates by means of angle sections and bolted to bottoms of verticals; railing: lattice

This bridge crosses the Big Nemaha River on an abandoned, unpaved road on the north-south line between Section 24, T5N, R10E and Section 19, T5N, R11E, Nemaha Precinct. The structure consists of a 6-panel, pinned Pratt pony truss with three timber stringer approaches (two located south of the main span, one north). The bridge is no longer used, and the timber deck has deteriorated. Nevertheless, it possesses good historical integrity, being largely unaltered and in good physical condition. Based on its pinned construction, narrow roadway width and wooden stringers, the bridge was probably built ca.1915. It may have been constructed by bridge contractor H.T. Ward, who built most of the steel bridges in Johnson County from 1900 to 1923.

This structure is typical of many small pony trusses built in Nebraska during the 1910s.

NAME(S) OF STRUCTURE
Big Nemaha River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C004902530; field inspection by Jeffrey A. Hess and Demian Hess, 16 July 1989; Proceedings of the Johnson County Commissioners, 1900-1923, located in Johnson County Courthouse, Tecumseh, Nebraska.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Big Nemaha River Bridge
NDOR: C004902920

JOHN03

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
county road over the Big Nemaha River; S32/33, T5N, R11E
southwest edge of Tecumseh; Johnson County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 27)

CONDITION
good

OWNER
Johnson County

span number:	2	superstructure:	steel, 6-panel, pin-connected, Pratt through truss
span length:	100.0'	substructure:	steel pile bent abutments with timber backwalls; steel cylinder piers; I-beam cutwater
total length:	229.0'	floor/decking:	double-layer timber deck over timber stringers
roadway wdt.:	17.8'	other features:	upper chord: back-to-back channel sections with cover plate and lacing; lower chord: 2 eyebars; vertical: back-to-back channels with lacing; diagonal: 2 eyebars; counter: 2 square eyerods with turnbuckles; portal and overhead bracing: back-to-back angles; top and bottom laterals: cross-braced cylindrical eyerods; floor beam: I-beam, riveted to hanger plates by means of angles and riveted to bottom of verticals; railing: lattice

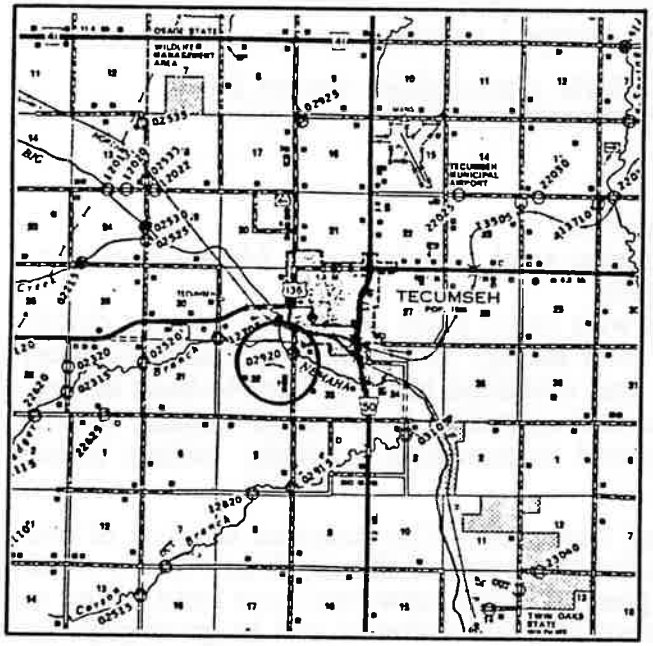
This bridge carries a gravel-surfaced county road over the Big Nemaha River in the City of Tecumseh. The structure consists of two pinned Pratt through trusses with a single steel stringer span on the north approach. With the exception of the north end of the south truss, which is supported by steel piles, the main spans rest on their original steel cylinder piers. I-beam cutwaters have been added to the upstream (west) face of the piers. The bridge possesses good historical integrity, being largely unaltered and in good physical condition. Based on its pinned construction and wooden stringers, the Big Nemaha River Bridge was probably built ca.1915. While the bridge's 18-foot roadway would normally suggest a later date, Johnson County did occasionally build wide bridges at the turn of the century. In 1898, for example, the county board ordered an iron bridge built with an 18-foot roadway. The Big Nemaha River Bridge may have been constructed by bridge contractor H.T. Ward, who erected most of the county's steel spans from 1900 to 1923.

The Big Nemaha River Bridge typifies the medium-span through trusses built in Nebraska during the 1910s.

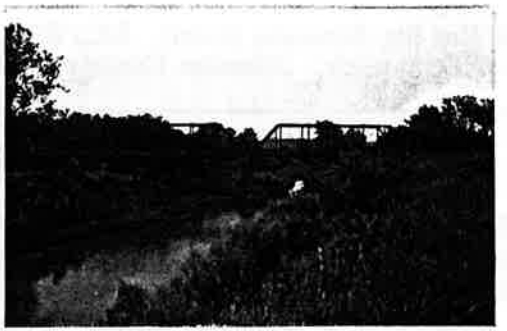
NAME(S) OF STRUCTURE

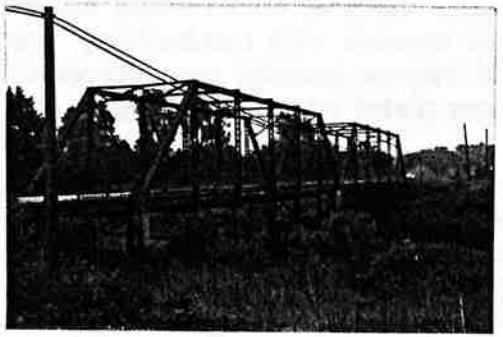
Big Nemaha River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C004902920; field inspection by Demian Hess, 16 July 1989; Proceedings of the Johnson County Commissioners, 1900-1923, located in Johnson County Courthouse, Tecumseh, Nebraska.

INVENTORIED BY

Demian Hess

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Big Nemaha River Bridge
NDOR: C004903205P

JOHN04

DATE(S) OF CONSTRUCTION
ca.1895

LOCATION
county road over the Big Nemaha River; S23, T4N, R11E
1 mile northwest of Elk Creek; Johnson County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 15)

CONDITION
good

OWNER
Johnson County

span number: 1
span length: 136.0'
total length: 230.0'
roadway wdt.: 17.3'

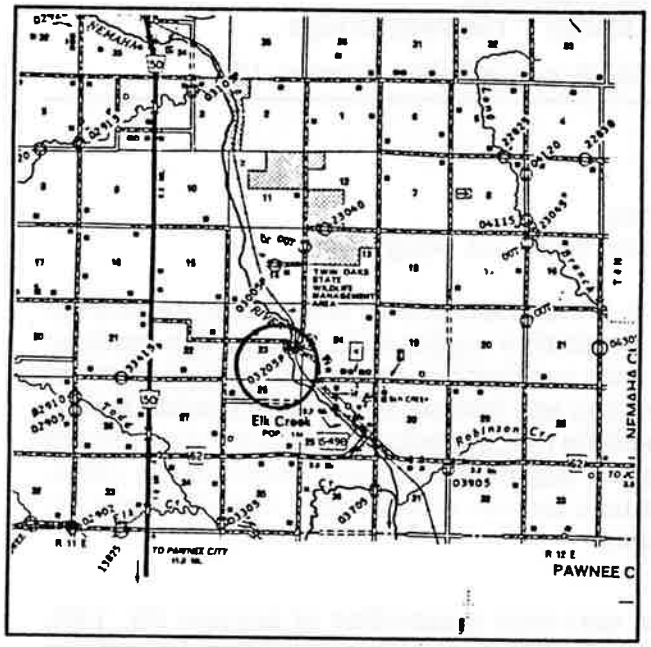
superstructure: steel, 7-panel, pin-connected Pratt through truss
substructure: steel pile bent abutments and piers with timber back and wingwalls
floor/decking: timber deck over timber stringers
other features: upper chord:4 Z-bars with lacing; end post: 4 Z-bars fastened to solid plate, reinforced with welded angles; lower chord: 2 eyebars; vertical: 4 angles with lacing; hip vertical: 2 square eyerods; counter: 2 square eyerods with turnbuckles in center panel, 1 circular eyerod with turnbuckle in other panels; portal: top and bottom struts with double lacing, struts composed of back-to-back angles, intermediate bracing below bottom strut composed of back-to-back angles; overhead sway bracing: 4 angles with lacing; top lateral: cross-braced circular eyerods with turnbuckles; bottom lateral: cross-braced circular eyerods; floor beam: built-up I-beam; railing: wire cable

This bridge carries a gravel-surfaced county road over the Big Nemaha River, just south of the east-west quarterline of Section 23, T4N, R11E, Todd Creek Precinct. The structure consists of a single pinned Pratt through truss with three timber stringer approaches on the west, one east. The bridge's upper chord and end posts are composed of steel Z-bars, which were not widely used in the 20th century, indicating that the truss probably dates to ca.1895. Other indications of an early construction date include built-up I-beam floor beams and wooden stringers. Johnson County contracted with several different bridge companies in the 1890s, and it is not possible to determine which constructed this particular bridge. According to a local resident, the truss was originally located in Section 14, T4N, R11E, approximately 1-1/2 miles north of its current location. By 1935, the bridge had been moved to Section 23 to carry the east-west quarterline road over the Big Nemaha River. The bridge was moved to its current location sometime around 1940 in order to place the east end of the bridge farther from a railroad crossing. Several significant changes have been made to the superstructure, including extensive welding to reinforce the upper chord, end posts and several of the verticals. Due to these alterations, the bridge has lost much of its historical integrity.

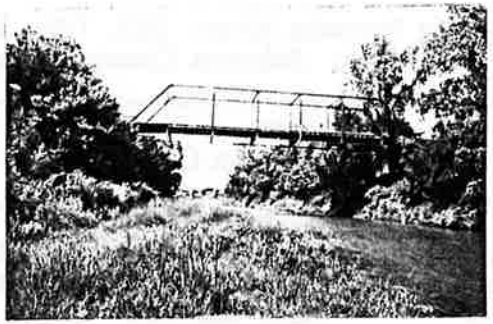
This a good example of nineteenth century through truss construction. The use of Z-bars in the upper and lower chords, in particular, give a good illustration of early construction techniques. Due to extensive welding, however, the bridge has lost its integrity and is not eligible to the National Register.

NAME(S) OF STRUCTURE
Big Nemaha River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C004903205P; Demian Hess, personal interview with Orville Peters, resident, Todd Creek Precinct, Johnson County, 19 July 1989; field inspection by Demian Hess, 19 July 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Hooker Creek Bridge
NDOR: C004910505

JOHN05

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over Hooker Creek; S4/5, T5N, R9E
2.5 miles south and 2.5 miles west of Sterling; Johnson County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 25)

CONDITION
good

OWNER
Johnson County

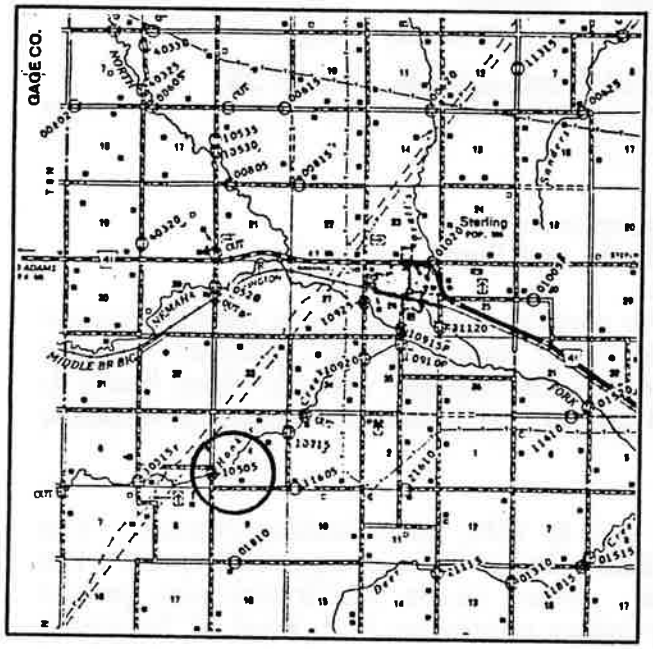
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt half-hip pony truss
span length:	40.0'	substructure:	steel pile bent abutments and piers, timber back- and flared wingwalls
total length:	102.0'	floor/decking:	double-layer wood deck over wood stringers
roadway wdt.:	17.6'	other features:	upper chord: back-to-back channels with cover plate and battens; lower chord: 2 square eyerods; vertical: 4 angles with lacing; diagonal: 2 square eyerods; counter: 1 square eyerod with turnbuckle; bottom lateral: cross-braced circular eyerod; floor beam: I-beam, riveted to hanger plates by means of angles and bolted to bottom of verticals; railing: lattice

This bridge carries a gravel-surfaced county road over Hooker Creek, between Sections 4 and 5, T5N, R9E, Sterling Precinct. The structure consists of a single pined Pratt half-hip pony truss, flanked on the north side by three timber stringer approach spans. The bridge possesses good historical integrity, being unaltered and in good physical condition. Based on its timber stringers, pinned construction, and half-hip design, it was probably built ca.1910. It may have been built by bridge contractor H.T. Ward of Tecumseh NE, who constructed most of Johnson County's steel bridges from 1900 to 1923.

This structure is typical of many half-hip Pratt pony trusses built in Nebraska.

NAME(S) OF STRUCTURE
Hooker Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C004910505; field inspection by Jeffrey A. Hess and Demian Hess, 16 July 1989; Proceedings of the Johnson County Commissioners, 1900-1923, located in Johnson County Courthouse, Tecumseh, Nebraska.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Big Nemaha River Bridge
NDOR: C004910915P

JOHN06

DATE(S) OF CONSTRUCTION
ca.1935

LOCATION
county road over the Big Nemaha River; S26, T6N, R9E
0.2 mile south of Sterling; Johnson County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 14)

CONDITION
poor

OWNER
Johnson County

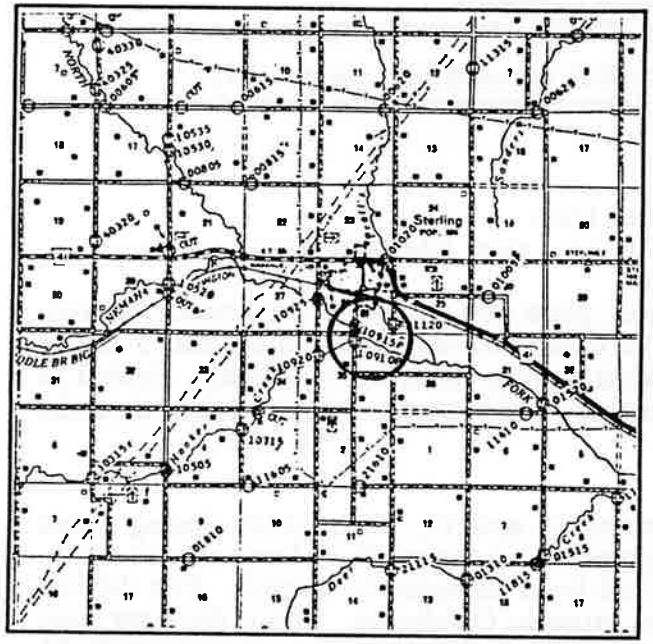
span number:	1	superstructure:	steel, 5-panel, rigid-connected Camelback pony truss
span length:	84.0'	substructure:	wood pile abutments, back- and wingwalls; wood / steel pile bent piers
total length:	170.0'	floor/decking:	double-layer wood deck over I-beam stringers
roadway wdt.:	13.4'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: paired, channels and solid plate with batten plates; vertical: built-up I-beam; diagonal: 2 angles with batten plates; bottom lateral: cross-braced angles; floor beam: I-beam, riveted to angles which are then bolted to bottom of verticals and gussets; railing: lattice on main span, wood railing on approaches

This bridge carries a gravel-surfaced county road over the Big Nemaha River, between Sections 10 and 11, T6N, R11E, Spring Creek Precinct. The structure consists of a single Camelback pony truss with two timber stringer approaches on the south and one on the north. The main span was moved to its current location in 1980 to replace an earlier bridge which had been damaged by a truck. The driver's insurance company paid the cost of replacing the bridge, and reportedly acquired the current truss in Oklahoma. When the new span was installed, sections were welded into the upper and lower chords of the center panel to lengthen the structure approximately 51 inches.

This bridge is a typical Camelback pony truss. Due to alterations and its interstate move, it has lost integrity and is not eligible for the National Register.

NAME(S) OF STRUCTURE
Big Nemaha River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C004910915P; Demian Hess, personal interview with Larry Naber, Johnson County Highway Superintendent, 18 July 1989; field inspection by Jeffrey A. Hess and Demian Hess, 16 July 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Big Nemaha River Bridge
NDOR: C004910925

JOHN07

DATE(S) OF CONSTRUCTION
1950

LOCATION
county road over the Big Nemaha River; S26/27, T6N, R9E
0.5 mile southwest of Sterling; Johnson County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 24)

CONDITION
good

OWNER
Johnson County

span number: 1
span length: 160.0'
total length: 162.0'
roadway wdt.: 22.2'

superstructure: steel, rigid-connected Parker through truss
substructure: concrete stub abutments with concrete backwalls and flared timber wingwalls
floor/decking: concrete deck over steel stringers
other features: upper chord: back-to-back channels with cover plate and lacing; lower chord: back-to-back channels with top and bottom battens; vertical: wide flange; diagonal: wide flange; intermediate longitudinal bracing: face-to-face angles with lacing; portal: top and bottom struts and intermediate bracing are composed of face-to-face angles with lacing; sway bracing: I-beam top struts, back-to-back angle bottom struts, single angle intermediate bracing; top lateral: cross-braced, face-to-face angles with lacing; bottom lateral: cross-braced, back-to-back angles; floor beam: I-beam, riveted by means of gussets to lower chord and bottom of vertical; railing: single angle

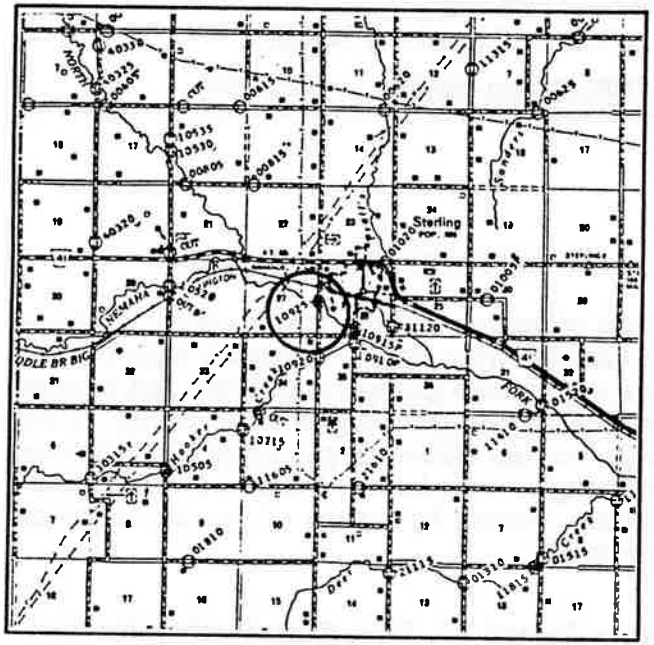
This bridge carries a gravel-surfaced county road over the Big Nemaha River, between Sections 26 and 27, T6N, R9E, Sterling Precinct. The structure is a single-span, riveted, Parker through truss with intermediate longitudinal bracing between the verticals. A plate in the southeast corner notes that the bridge was constructed in 1950. The plate reads: CAPACITY/20 TONS/ER-5-28(1)-1/1950.

The Big Nemaha River Bridge is typical of 1950s highway bridge construction. Due to its recent date, the bridge is not yet eligible for the National Register.

NAME(S) OF STRUCTURE

Big Nemaha River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP

TAKEN FROM NEBRASKA DEPARTMENT OF ROADS GENERAL HIGHWAY MAP

SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C004910925; capacity plate in southeast corner of bridge; field inspection by Jeffrey A. Hess and Demian Hess, 16 July 1989.

INVENTORIED BY

Demian Hess

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Lost Branch Bridge JOHN08
NDOR: C004911105

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over Lost Branch; S13/14, T4N, R9E
2.5 miles east and 1.7 miles south of Crab Orchard; Johnson County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 25)

CONDITION
good

OWNER
Johnson County

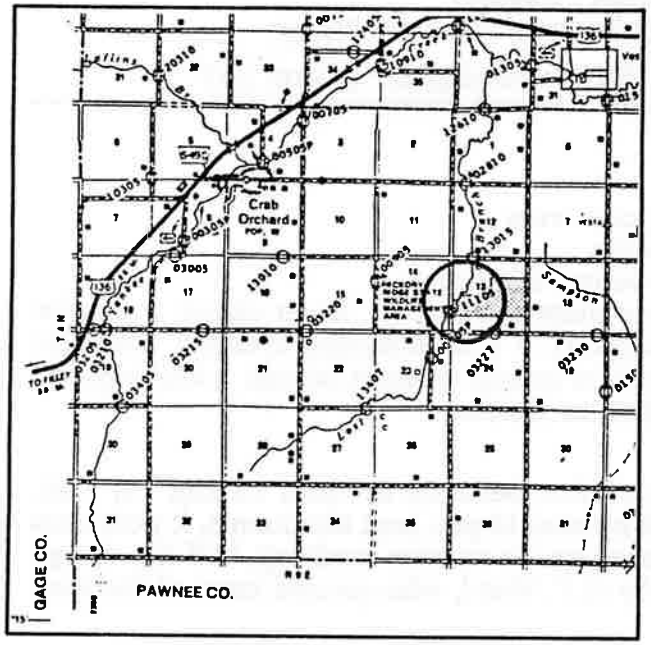
span number:	1	superstructure:	steel, 3 panel, pin-connected Pratt half-hip pony truss
span length:	40.0'	substructure:	steel pile bent abutments with timber backwalls
total length:	41.0'	floor/decking:	double-layer wood deck over wooden and I-beam stringers
roadway wdt.:	13.7'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: 2 circular eyerods; vertical: 4 angles with lacing; diagonal: 2 square-section eyerods; counter: crossed square eyerods with turnbuckles in center panel; bottom lateral: 2 cross-braced circular eyerods; floor beam: I-beam, U-bolted to vertical

This bridge carries an unpaved county road over Lost Branch and is located on the north-south line between Sections 13 and 14, T4N, R9E, Western Precinct. Consisting of a single-span, pinned Pratt half-hip pony truss, supported by steel H-pile bent abutments, it possesses an average degree of historical integrity, being unaltered and in good physical condition. Based on its narrow roadway, half-hip design and wooden stringers, the bridge was probably built ca.1910. It may have been constructed by H.T. Ward, who erected most of the steel bridges in Johnson County from 1900 to 1923.

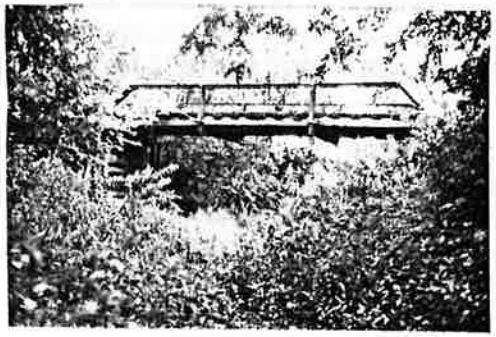
This structure is typical of many half-hip Pratt pony trusses built in Nebraska.

NAME(S) OF STRUCTURE
Lost Branch Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C004911105; field inspection by Jeffrey A. Hess and Demian Hess, 16 July 1989; Proceedings of the Johnson County Commissioners, 1900-1923, located in Johnson County Courthouse, Tecumseh, Nebraska.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Deer Creek Bridge JOHN09
NDOR: C004911815

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over Deer Creek; S7/18, T5N, R10E
1 miles south and 2.3 miles west of St. Mary; Johnson County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 25)

CONDITION
good

OWNER
Johnson County

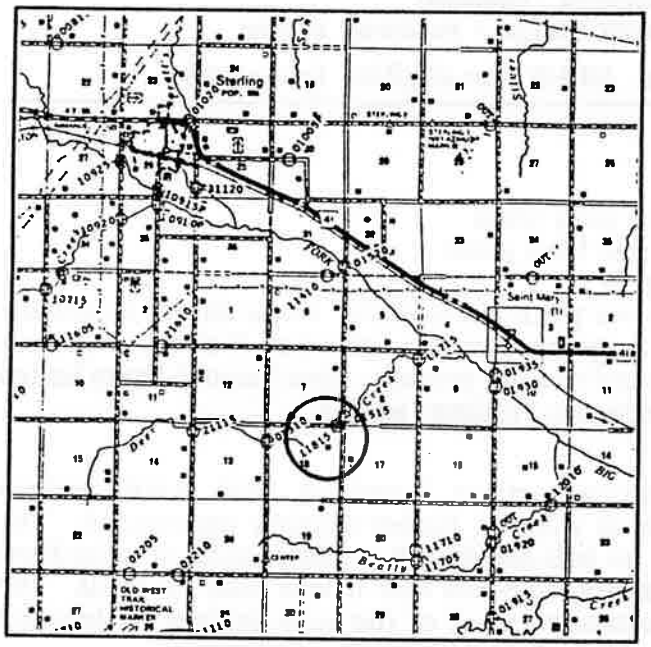
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt half-hip pony truss
span length:	50.0'	substructure:	timber / steel pile bent abutments; steel pile bent piers
total length:	64.0'	floor/decking:	double-layer wood deck over wood stringers
roadway wdt.:	13.7'	other features:	upper chord: back-to-back channels with cover plate and battens; lower chord: 2 eyebars; vertical: 2 angles with lacing; diagonal: 2 square eyerods; counter: 2 circular eyerods with turnbuckles; bottom lateral: cross-braced circular eyerods; floor beam: I-beam bolted to hanger plates and riveted to bottom verticals; railing: angles

This bridge carries an unpaved county road over Deer Creek on the east-west line between Sections 7 and 18, T5N, R10E, Helena Precinct. The structure consists of a single pinned Pratt half-hip pony truss, flanked on both sides by timber stringer approaches. The bridge possesses good historical integrity, being in good condition and largely unaltered. Its half-hip design predates state standardized plans and, coupled with its narrow roadway width, pinned construction and wooden stringers, suggests that it was built ca.1910. The structure may have been built by bridge contractor H.T. Ward, who appears to have constructed most of the steel bridges in Johnson County from 1900 to 1923.

This structure is typical of many half-hip Pratt pony trusses built in Nebraska.

NAME(S) OF STRUCTURE
Deer Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C004911815; field inspection by Jeffrey A. Hess and Demian Hess, 16 July 1989; Proceedings of the Johnson County Commissioners, 1900-1923, located in Johnson County Courthouse, Tecumseh, Nebraska.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Little Nemaha River Bridge JOHN10
NDOR: C004913320

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over the Little Nemaha River; S10/11, T6N, R11E
0.5 miles south of Cook; Johnson County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 28)

CONDITION
good

OWNER
Johnson County

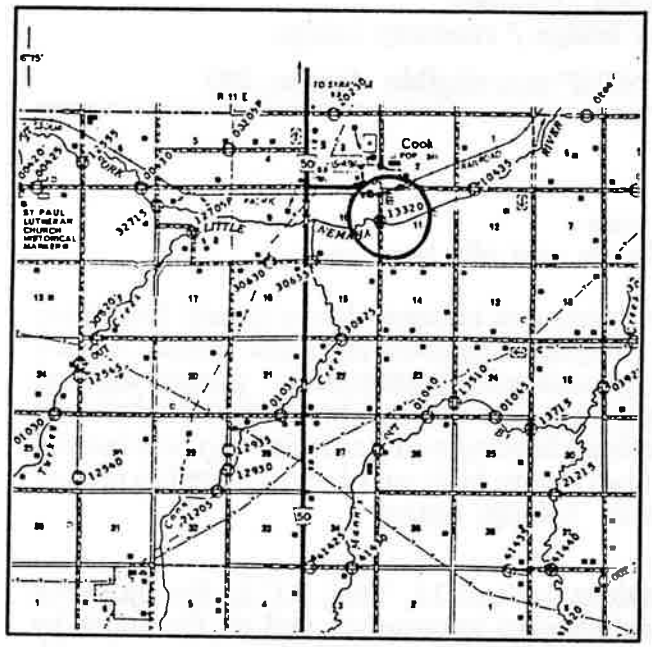
span number:	1	superstructure:	steel, 6-panel, pin-connected Pratt through truss
span length:	90.0'	substructure:	timber / steel pile bent abutments; steel cylinder and pile bent piers
total length:	209.0'	floor/decking:	wood deck over I-beam stringers
roadway wdt.:	17.8'	other features:	upper chord: back-to-back channels with cover plate and battens; lower chord: 2 eyebars; vertical: back-to-back channels with lacing; diagonal: eyebars in center panels, square eyerods in end panels; counter: 2 circular eyerods with turnbuckles; portal: top and bottom struts and bracing composed of single angles; overhead bracing: 4 angles with lacing; sway bracing: single angle tied to overhead bracing and verticals; top and bottom lateral: cross-braced circular section eyerod; floor beam: built-up I-beam riveted to hanger plates which are riveted to bottom of verticals; railing: lattice

This bridge carries a gravel-surfaced county road over the Little Nemaha River, between Sections 10 and 11, T6N, R11E, Spring Creek Precinct. It consists of a single pinned Pratt through truss, flanked on the north by three steel stringer approaches and on the south by two steel and wood stringer approaches. The bottom portal struts are damaged, and the truss has been extensively reinforced with welded sections. With the exception of the truss's south pier, the substructure has been rebuilt. Due to these changes, the bridge has lost much of its historical integrity. Based on its appearance, the bridge was constructed ca.1910. The contractor may have been H.T. Ward, who built most of the steel bridges in Johnson County from 1900 to 1923.

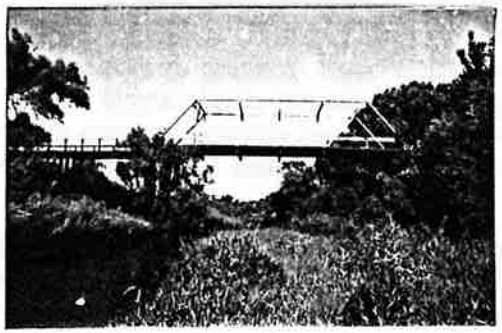
This structure is typical of many through trusses built in Nebraska during the 1910s. Due to alterations, it is not eligible for the National Register.

NAME(S) OF STRUCTURE
Little Nemaha River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C004913320; field inspection by Demian Hess, 17 July 1989; Proceedings of the Johnson County Commissioners, 1900-1923, located in the Johnson County Courthouse, Tecumseh, Nebraska.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Keim Stone Arch Bridge
NDOR: C004913710

JOHN11

DATE(S) OF CONSTRUCTION
1916

LOCATION
county road over stream; S24/19, T5N, R11E/R12E
3 miles east and 1 mile north of Tecumseh; Johnson County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 44)

CONDITION
good

OWNER
Johnson County

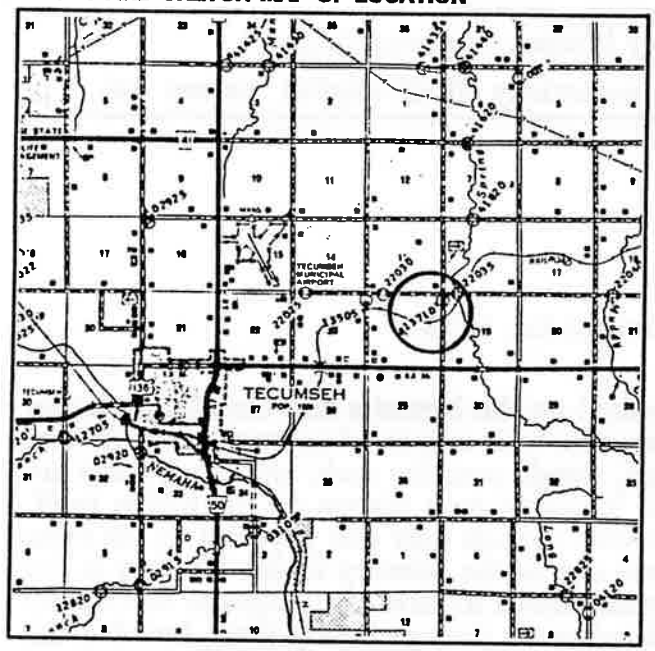
span number:	1	superstructure:	limestone arch
span length:	28.0'	substructure:	stone abutments
total length:	29.0'	floor/decking:	gravel over earth fill
roadway wdt.:	18.0'	other features:	marble plaque on parapet: **Built by Keim Cement Co. 1916**

The Keim Stone Arch Bridge carries a gravel-surfaced county road over a small stream. Located on the Nemaha and Lincoln Township line, it is constructed of semi-coursed limestone rubble. The single-span bridge springs from grade with a span of approximately 28 feet and an overall width of approximately 21 feet. A low parapet, approximately three feet high, stands over the arch, and stone posts are set in each corner of the bridge. A double pipe rail connects each post to the parapet. As indicated by a plaque on the bridge itself, it was built in 1916 by the Keim Cement Company. The Johnson County Commissioners' Record reveals only one payment to the Keim Cement Company in 1916, on September 4th for $1121.16. The Keim Cement Company was one of the primary bridge builders in the county, and appears to have been the only builder of stone bridges and culverts. The company made its first claim against the county for stone bridge work in 1906, followed by at least ten other claims for stone bridges and culverts. George Phillip Keim founded the general-construction firm in Tecumseh in 1882. His sons, Peter and Jacob, later joined him, and the company became known as Keim and Sons. The Keim family continued to operate the firm until at least the 1950s. In the early years, the company worked primarily in Johnson, Nemaha and Pawnee Counties. It became involved in highway construction in 1918, and was engaged in highway projects throughout Nebraska by 1956. Major commissions reportedly include the Johnson County Home, the Tecumseh Fire Department building, and "construction of structures on one of the first highway projects in southeast Nebraska - No. 3 highway between Tecumseh and Crab Orchard." This bridge appears to be the only surviving stone bridge constructed by the Keim Cement Company in Johnson County.

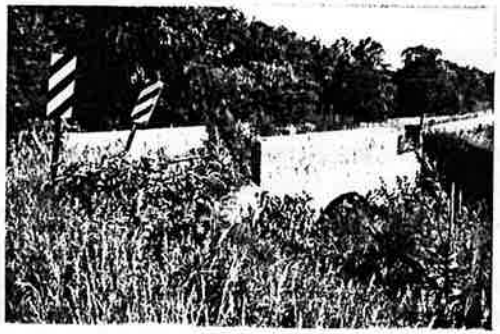
The Keim Stone Arch Bridge is a rare example of early twentieth century stone arch bridge construction. It also appears to be the sole surviving stone bridge built by a prominent local bridge builder.

NAME(S) OF STRUCTURE
Keim Stone Arch Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C004913710; **Johnson County Centennial, 1856-1956** (no pub., ca.1956), p. 40 (copy available at Tecumseh City Hall, Tecumseh, Nebraska); Proceedings of the Johnson County Commissioners, 12 June 1901, 8 September 1906, 16 November 1907, 7 December 1907, 9 January 1908, 22 August 1908, 6 October 1908, 28 November 1908, 3 September 1909, 28 September 1909, 4 September 1916, locating in Johnson County Courthouse, Tecumseh, Nebraska; field inspection by Demian Hess, 17 July 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Mann's Branch Bridge
NDOR: C004913715

JOHN12

DATE(S) OF CONSTRUCTION
ca.1935

LOCATION
county road over Mann's Branch; S25/30, T6N, R11E/12E
2 miles east and 3 miles south of Cook; Johnson County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 18)

CONDITION
good

OWNER
Johnson County

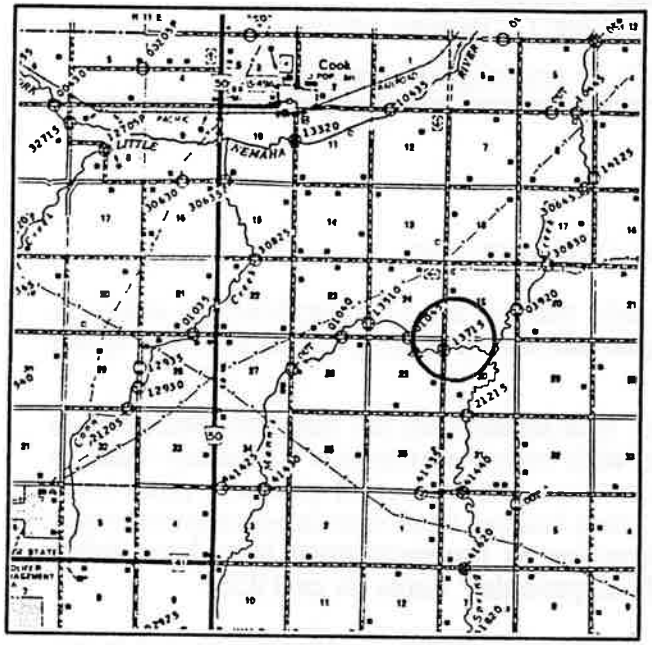
span number:	3	superstructure:	steel stringer
span length:	32.0'	substructure:	stone abutments and flared, sloped wingwalls; steel bent piles
total length:	64.0'	floor/decking:	double-layer wood deck over steel stringers
roadway wdt.:	18.0'	other features:	stringers: 10 stringers, outer stringers are channels, the rest are I-beams; bracing: stringers are tied by transverse eyerods; railing: center span has lattice railing, angles on other spans

This bridge carries a gravel-surfaced county road over Mann's Branch in Spring Creek Precinct. It is located on the line between Section 25, T5N, R11E and Section 30, T5N, R12E. The bridge is a 3-span steel stringer structure with stone abutments. At some time, a concrete pad or sill was added to the tops of the abutments to raise the bridge approximately one foot and new steel pile bent piers were added. Still visible beneath the bridge, the original north pier consists of two steel cylinders cross-braced with circular-section eyerods. Due to these alterations, the bridge has lost much of its historical integrity. The stone construction of the piers must have been labor intensive, and suggests the bridge was built as a Depression Era work relief project. As such, it probably dates to ca.1935.

Aside from its stone abutments, the bridge appears to be a typical steel stringer span. Due to alterations, it has lost integrity and is not eligible for the National Register.

NAME(S) OF STRUCTURE
Mann's Branch Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads: Structure Inventory and Appraisal: Structure Number C004913715; field inspection by Demian Hess, 18 July 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Spring Creek Bridge JOHN13
NDOR: C004941440

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over Spring Creek; S31/6, T6N/5N, R12E
5 miles south and 2.3 miles east of Cook; Johnson County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 25)

CONDITION
good

OWNER
Johnson County

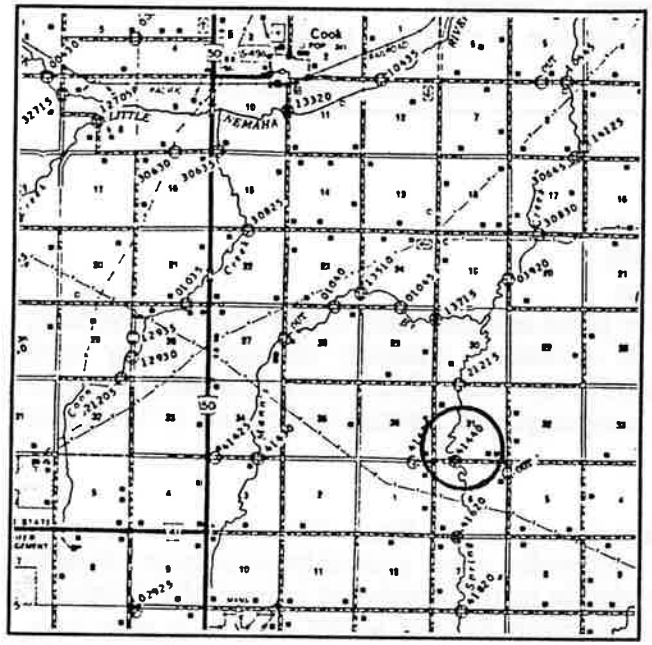
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt half-hip pony truss
span length:	45.0'	substructure:	stone abutments with sloped, flared wingwalls
total length:	45.0'	floor/decking:	double-layer wood deck over I-beam stringers
roadway wdt.:	13.3'	other features:	upper chord: back-to-back channels with cover plate and battens; lower chord: 2 eyebars; vertical: 4 angles with lacing; diagonal: 2 eyebars; counter: circular eyebar with turnbuckle; bottom lateral: cross-braced circular eyerod; floor beam: I-beam bolted to angles which are riveted to hanger plates - hanger plates riveted to bottom of verticals; railing: angles on channel-section posts

This bridge carries a gravel-surfaced county road over Spring Creek on the Spring Creek/Lincoln township line. The structure consists of a single-span, pinned Pratt half-hip pony truss, supported by stone abutments. Stone wingwalls were probably once part of both abutments, but are now visible only on the west side. The remnants of timber wingwalls are visible in the northeast corner of the bridge. The bridge's narrow roadway width, pinned construction and half-hip design indicate a construction date of about 1910. It may have been constructed by bridge contractor H.T. Ward of Tecumseh NE, who built most of the steel bridges in Johnson County from 1900 to 1923. The wingwalls have begun to deteriorate, but the structure is largely unaltered and possesses average historical integrity.

This structure is typical of many small pony trusses built in Nebraska during the early 1900s.

NAME(S) OF STRUCTURE
Spring Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C004941440; field inspection by Demian Hess, 18 July 1989; Proceedings of the Johnson County Commissioners, 1900-1923, located in Johnson County Courthouse, Tecumseh, Nebraska.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Spring Creek Bridge
NDOR: C004941620

JOHN14

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over Spring Creek; S6/7, T5N, R12E
3 miles north and 3.2 miles east of Tecumseh; Johnson County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 25)

CONDITION
good

OWNER
Johnson County

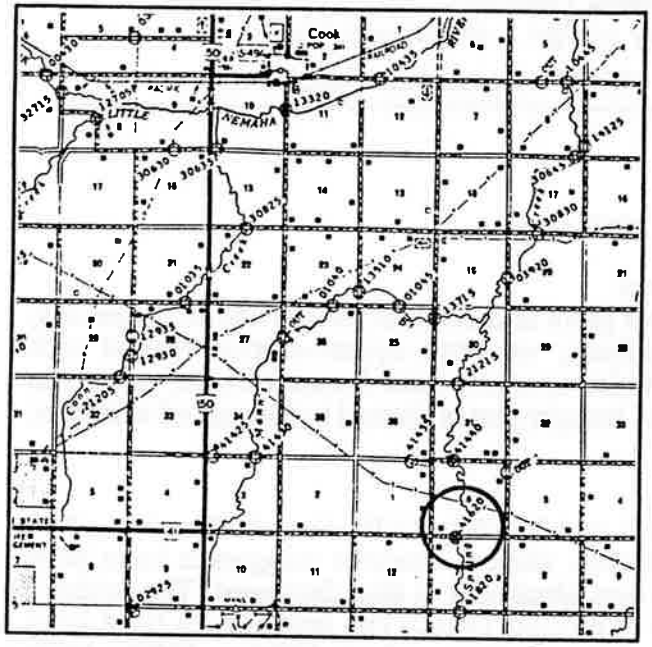
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt half-hip pony truss
span length:	43.0'	substructure:	stone abutments
total length:	44.0'	floor/decking:	double-layer wood deck over I-beam stringers
roadway wdt.:	12.8'	other features:	upper chord: back-to-back channels with cover plate and battens; lower chord: 2 eyebars; vertical: 4 angles with lacing; diagonal: eyebars; counter: square-section eyerod with turnbuckle; bottom lateral: cross-braced circular eyerods; floor beam: I-beam, riveted to angles which are then bolted to hanger plates--hanger plates riveted to bottom of verticals; railing: lattice

This bridge carries an unpaved county road over Spring Creek on the line between Sections 6 and 7, T5N, R12E, Lincoln Precinct. The structure is a single-span, pinned Pratt half-hip pony truss, supported by stone abutments. Flared, sloped, concrete wingwalls have been added to the west side, although stone wingwalls remain on the east. The south side of the east abutment is also damaged. The bridge's narrow roadway width, pinned construction and half-hip design indicate a construction date of around 1910. The bridge may have been built by bridge contractor H.T. Ward of Tecumseh NE, who built most of the steel bridges in Johnson County from 1900 to 1923. Aside from minor alterations and damage to the abutments, the Spring Creek Bridge is largely unchanged and possess average historical integrity.

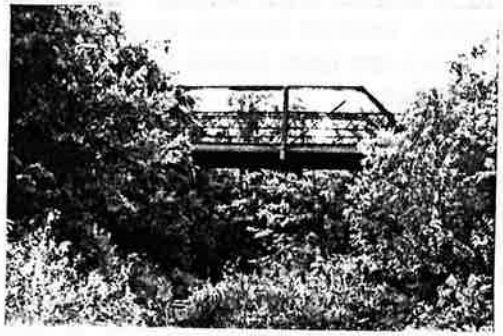
This structure is typical of many small pony trusses built in Nebraska during the early 1900s.

NAME(S) OF STRUCTURE
Spring Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C004941620; field inspection by Demian Hess, 17 July 1989; Proceedings of the Johnson County Commissioners, 1900-1923, located in Johnson County Courthouse, Tecumseh, Nebraska.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Big Nemaha River Bridge JOHN15
NDOR: S050 03135

DATE(S) OF CONSTRUCTION
1947

LOCATION
State Highway 50 over North Fork of Big Nemaha River; S33, T5N, R11E
1 mile south of Tecumseh; Johnson County, Nebraska

USE (ORIGINAL / CURRENT)
highway bridge / highway bridge

RATING NRHP non-eligible (score: 39)

CONDITION
excellent

OWNER
Nebraska Department of Roads

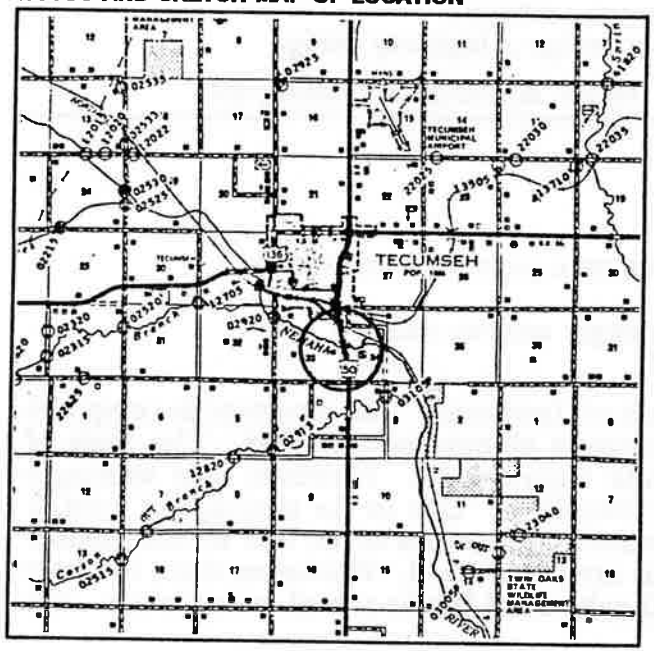
span number:	3	superstructure:	steel stringer
span length:	104.0'	substructure:	concrete abutments and backwalls; solid, concrete piers with cutwaters
total length:	225.0'	floor/decking:	concrete deck over steel stringers
roadway wdt.:	26.3'	other features:	stringers: 5 I-beam stringers with bridging; angle section railing

Bridge Number S050 03135 carries State Highway 50 over the Big Nemaha River just south of Tecumseh. The structure is composed of three cantilevered steel stringer spans, built on a 45-degree skew and supported by concrete abutments and piers. The State of Nebraska designed the bridge in 1944 in conjunction with planned improvements to State Highway 50. However, war shortages prevented immediate construction, as the district engineer noted in his biennial report for 1945-1946: "Due to the shortage of steel, it was necessary to defer the letting of contracts for two railroad grade separations, a bridge across the Nemaha River, and several smaller bridges..." The bridge capacity plates indicate the structure was built in 1947, but state plans are dated 1948. Whichever date, the state awarded the construction contract to the Francis Orshek Company of Fremont NE, and the Omaha Steel Works served as fabricator. The bridge is apparently unaltered and has good integrity.

This structure appears to be typical of state highway bridge construction during the 1940s.

NAME(S) OF STRUCTURE
Big Nemaha River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number S050 03135; Nebraska Department of Roads and Irrigation, **Twenty-Sixth Biennial Report, 1945-1946**, p. 169; also see the following plans, on file in the Bridge Division, Nebraska Department of Roads: Bridge Plan Number F-454(1)-1, 1944; Shop Plan Number 9397, dated 1948; field inspection by Demian Hess, 16 July 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Tecumseh Viaduct JOHN16
NDOR: S050 03168

DATE(S) OF CONSTRUCTION
1947-48

LOCATION
State Highway 50 over Burlington Northern Railroad; S33, T5N, R11E
southern edge of Tecumseh; Johnson County, Nebraska

USE (ORIGINAL / CURRENT)
highway overpass / highway overpass

RATING NRHP non-eligible (score: 38)

CONDITION
excellent

OWNER
Nebraska Department of Roads

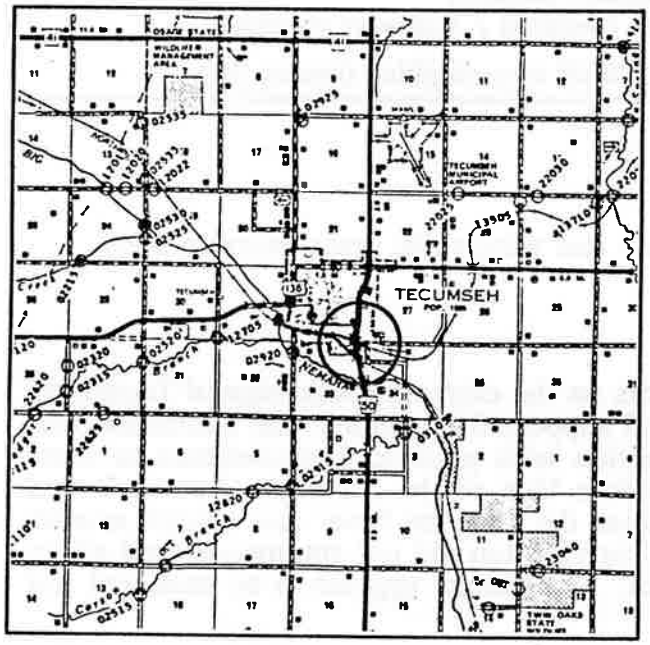
span number:	5	superstructure:	continuous concrete slab
span length:	48.0'	substructure:	wood pile abutments with concrete sill, back- and wingwalls; open concrete piers
total length:	160.0'	floor/decking:	concrete deck
roadway wdt.:	26.3'	other features:	angle section railing

The Tecumseh Viaduct carries State Highway 50 over the Burlington Northern Railroad tracks on the extreme south edge of Tecumseh. The overpass features a five-span continuous concrete slab, built on a 37-degree skew and supported by timber pile abutments and concrete piers. The State of Nebraska apparently designed the viaduct in 1945 in connection with planned improvements to State Highway 50. However, the district engineer noted in his biennial report for 1945-1946 that "due to the shortage of steel, it was necessary to defer the letting of contracts for two railroad grade separations, a bridge across the Nemaha River and several smaller bridges..." This structure was apparently one of the railroad separations deferred, because construction did not commence until either 1947 or 1948. Shop plans list the Francis Orshek Company of Fremont NE as the contractor. The viaduct appears to be unaltered and has good integrity.

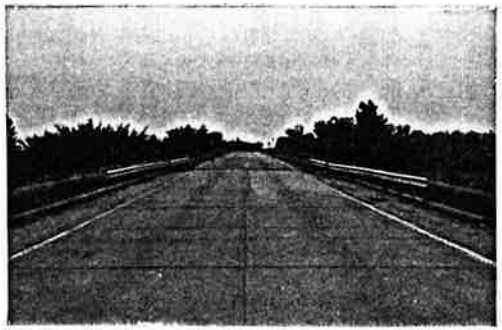
This structure is typical of continuous concrete slab construction in Nebraska during the 1940s.

NAME(S) OF STRUCTURE
Tecumseh Viaduct

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number S050 03168; Department of Roads and Irrigation, **Twenty-Sixth Biennial Report**, 1945-46, p. 170; also see the following plans, on file in the Bridge Division, Nebraska Department of Roads: "160' Multiple Span Concrete Slab Viaduct," February 1945, revised 11 December 1945, traced August 1948, plan number FG-454(4)-1; Shop Plan Number 9396, dated 1948; field inspection by Demian Hess, 16 July 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Lincoln Street Bridge
NDOR: U2415F2205

JOHN17

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
Lincoln Street over intermittent stream; S28, T5N, R11E
Tecumseh; Johnson County, Nebraska

USE (ORIGINAL / CURRENT)
city street bridge / city street bridge

RATING determined NRHP non-eligible (score: 15)

CONDITION
poor

OWNER
City of Tecumseh

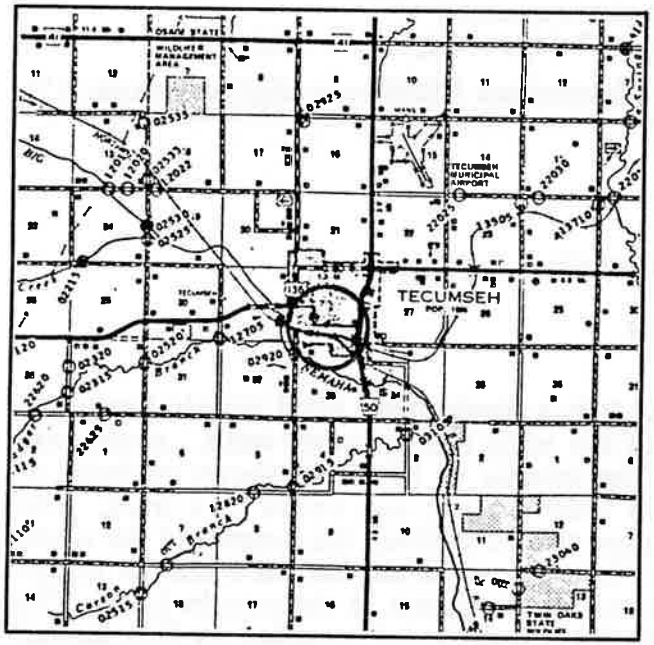
span number:	1	superstructure:	concrete filled spandrel arch
span length:	24.0'	substructure:	concrete abutments and flared concrete wingwalls
total length:	26.0'	floor/decking:	asphalt paving over earth fill
roadway wdt.:	16.9'	other features:	railing: concrete parapet with incised panels

The Lincoln Street Bridge carries a cit street over a small stream in the City of Tecumseh. It is a single-span, filled spandrel concrete arch with flared concrete wingwalls. A concrete coping and molding run along the top of the wing and spandrel walls. A concrete parapet detailed with incised panels sits on top of the coping, centered over the arch. The interior of the vault shows evidence of cracking and a large section of parapet in the northeast corner of the bridge broke away in 1989 when it was struck by a truck. The city of Tecumseh replaced the missing section of parapet with a steel guard rail. A utility pipe also runs along the outside of the south parapet. Due to these changes and its deteriorating condition, the bridge has poor historical integrity. It is not known when the bridge was built, but it may date to ca.1910. According to county records, concrete was first used to build culverts in the area in 1906. The first recorded concrete bridge was built by Charles Pickering in 1909 for $100. In 1910, the county board awarded its first annual contract for concrete bridge work to the Monarch Engineering Company, which, however, refused to fulfill the agreement. A handful of companies appear to have built concrete bridges in Johnson County during the early 1900s, and any one of them may have built this structure. These companies are Wilson and Deen, Wilson Reinforced Concrete Company, H.T. Ward (later named the Ward Bridge Company), and Keim Brothers (later named the Keim Cement Company).

This structure is typical of early, non-standardized concrete arch bridge construction in Nebraska. Due to deterioration, the bridge has lost integrity and is not eligible for the National Register.

NAME(S) OF STRUCTURE
Lincoln Street Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number: U2415F2205; Lavern Bartels, Mayor of Tecumseh, to William Hurst, Nebraska Department of Roads, 10 February 1989 (copy on file at the Nebraska Department of Roads); field inspection by Jeffrey A. Hess and Demian Hess, 16 July 1989; Proceedings of the Johnson County Commissioners, located in the Johnson County Courthouse, Tecumseh, Nebraska, see the following entries: 1 September and 15 September 1906, 8 August 1908, 12 September 1908, 3 September 1909, 22 November 1910, 26 August 1913, 30 September 1913, 14 October 1913.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Culvert
NDOR: none

JOHN18

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over stream; S3/10, T4N, R9E
1 mile east of Crab Orchard; Johnson County, Nebraska

USE (ORIGINAL / CURRENT)
roadway culvert / roadway culvert

RATING NRHP non-eligible (score: 15)

CONDITION
good

OWNER
Johnson County

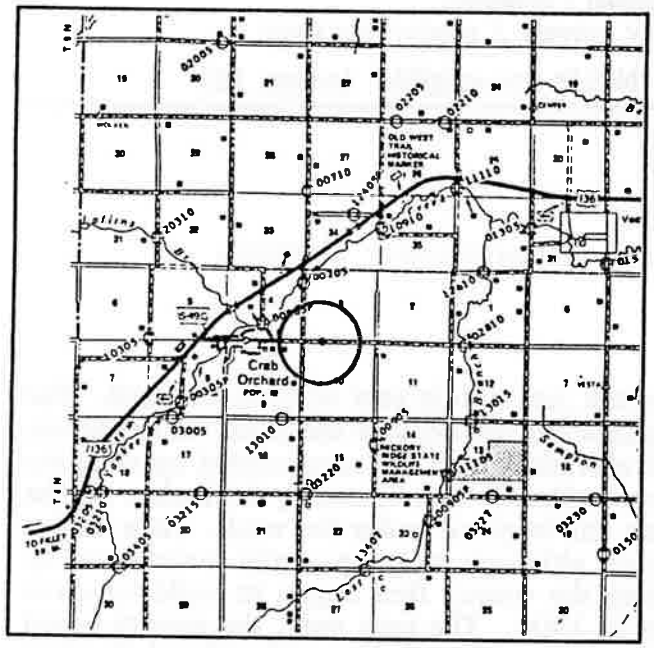
span number:	1	superstructure:	concrete arch culvert
span length:	approx. 10'	substructure:	concrete abutments and impost ledges; flared, sloped concrete wingwalls
total length:	approx. 12'	floor/decking:	concrete slab over earth fill
roadway wdt.:	approx. 24'	other features:	concrete railing centered on parapet

This single-barrel concrete arch culvert carries a gravel-surfaced county road over a small creek just a mile east of Crab Orchard. The arch springs from low impost ledges, with a span of approximately 10 feet. A deteriorating concrete slab covers the floor, and concrete wingwalls are set in each corner. Concrete parapets rise above the spandrel walls on each elevation, and are surmounted by concrete railings with recessed panels. Marks in the concrete of the vault suggest that the bridge was widened approximately 85 inches on the south and 59 inches on the north. The remnants of what appear to be wooden falsework are still in place under the vault. As a single-barrel culvert, this structure does not appear in the Nebraska Department of Roads Inventory, although it is apparently maintained by the county. The culvert appears to be of early construction, and may date to ca.1910, when the county first began to build concrete culverts. The first concrete bridge on record appears to have been built in Johnson County in 1909. The next year, the county board awarded its first annual contract for concrete bridge work to the Monarch Engineering Company. Although Monarch refused to enter into the agreement, the award indicates that concrete construction was fairly common by 1910. It is not known who constructed this structure. A number of companies were building concrete culverts and bridges in Johnson County in the early 1900s, including the firm of Wilson and Deen, the Wilson Reinforced Concrete Company, H.T. Ward and Company (later renamed the Ward Bridge Company), and Keim Brothers (later renamed the Keim Cement Company).

This structure appears to be typical of early, non-standardized, concrete culvert construction in Nebraska.

NAME(S) OF STRUCTURE
Culvert

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Field inspection by Jeffrey A. Hess and Demian Hess, 16 July 1989; Proceedings of the Johnson County Commissioners, located in Johnson County Courthouse, Tecumseh, Nebraska, see the following entries: 1 September and 15 September 1906, 8 August 1908, 12 September 1908, 3 September 1909, 22 November 1910, 26 August 1913, 30 September 1913, 14 October 1913.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Brule State Aid Bridge
NDOR: SL51A00068

KEIT01

DATE(S) OF CONSTRUCTION
1934-1935

LOCATION
State Link 51A over the South Platte River; S22, T13N, R40W
0.5 mile south of Brule; Keith County, Nebraska

USE (ORIGINAL / CURRENT)
highway bridge / highway bridge

RATING NRHP non-eligible (score: 39)

CONDITION
excellent

OWNER
Nebraska Department of Roads

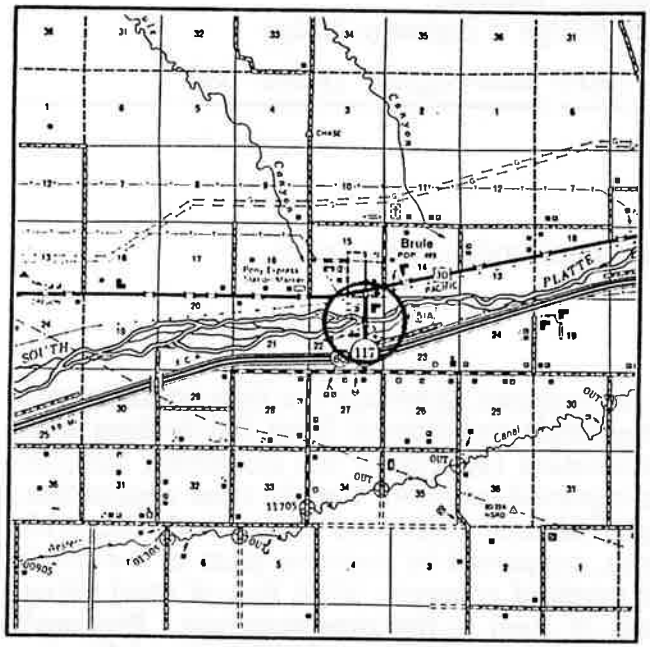
span number:	11	superstructure:	steel cantilevered stringer
span length:	85.0'	substructure:	concrete abutments and wingwalls; steel pile bent and concrete piers
total length:	700.0'	floor/decking:	asphalt over concrete decking
roadway wdt.:	19.0'	other features:	guardrail: Armco with concrete curbing

In late summer 1934 engineers for the Nebraska Bureau of Roads and Bridges completed the contract drawings for two multiple-span bridges over the South Platte River in Keith County. With an estimated cost of $98,000, the Brule and Roscoe State Aid Bridges were to be funded in part by the State Aid Bridge Fund ($50,000) and the Public Works Administration ($28,000); the remaining $20,000 came from county funds. "The bridge spans proper will be identical for each site," the bureau reported in 1934. "But the road approaches, dikes, jetties and protection work will vary according to the requirements of the topography of each individual site." Both the Brule (Project SAB-870) and Roscoe (Project SAB-869) structures were 7-span steel I-beam stringers, supported by concrete piers in the river's channel, with steel pile bent piers in the floodplain. The Brule Bridge required 1463 cubic yards of concrete, 3326 feet of steel piling, 81,035 pounds of reinforcing steel, 14,225 pounds of steel in the piers and 281,645 pounds of steel in the superstructure. Proposals to erect the two structures were received on September 28, 1934, with the understanding that work would be completed by the following April. Employing steel fabricated at the McClintic - Marshall Corporation's Chicago plant, both structures were duly completed by the spring of 1935. In 1975 four steel stringer spans were added onto the Brule Bridge, and its roadway was widened to 36 feet by extending the piers and adding two new lines of stringers.

Built in 1934-1935, the Brule and Roscoe State Aid Bridges were among the final projects to receive such state funding. Soon after their erection, the State Aid Bridge fund was phased out, ceasing entirely in 1936. The two structures are thus historically significant as regionally important crossings of the Platte River and as the most recent of the existing state aid bridges in Nebraska. They are technologically significant as examples of long-span beam construction in the state. As early as 1932 the bureau of roads began experimenting with cantilever stringer design as an alternative to truss or transverse joist girder configurations. "These bridges [Brule and Roscoe] will mark a distinct advance in State-Aid bridge design on the South Platte River," the bureau stated. The two structures demonstrated not only the economy and durability of such steel stringer design, but the speed with which it could be erected. Although both historically and technologically significant, the Brule Bridge suffers from a substantial loss of physical integrity. (The Roscoe Bridge (KEIT02) remains unaltered.)

NAME(S) OF STRUCTURE
Brule State Aid Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number SL51A00068; Department of Roads and Irrigation, **Twentieth Biennial Report**, 1933-1934, pp. 86, 89, 90; Aivars G. Ronis, "Nebraska State Aid Bridges," typewritten report by Nebraska Department of Roads, June 1971, revised 1978; "500'0" Multiple Deck Steel Girder Spans, Brule State Aid Bridge," Nebraska Department of Roads and Irrigation, original construction drawings, September 1934, located at Nebraska Department of Roads, Lincoln, Nebraska; field inspection by Clayton Fraser, 2 May 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Roscoe State Aid Bridge
NDOR: SL51B00074

KEIT02

DATE(S) OF CONSTRUCTION
1934-1935

LOCATION
State Link 51B over the South Platte River; S4/5, T13N, R37W
0.5 mile southeast of Roscoe; Keith County, Nebraska

USE (ORIGINAL / CURRENT)
highway bridge / highway bridge

RATING determined NRHP eligible (score: 44)

CONDITION
excellent

OWNER
Nebraska Department of Roads

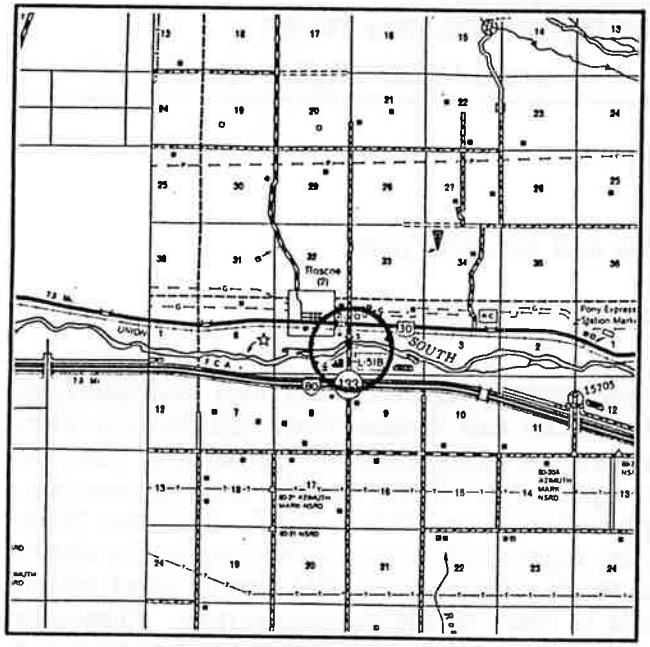
span number:	7	superstructure:	steel cantilever stringer
span length:	85.0'	substructure:	concrete abutments and wingwalls; steel pile and concrete piers
total length:	500.0'	floor/decking:	asphalt over concrete decking
roadway wdt.:	19.0'	other features:	guardrail: concrete parapets with steel rails

In late summer 1934 engineers for the Nebraska Bureau of Roads and Bridges completed the contract drawings for two multiple-span bridges over the South Platte River in Keith County. With an estimated cost of $98,000, the Brule and Roscoe State Aid Bridges were to be funded in part by the State Aid Bridge Fund ($50,000) and the Public Works Administration ($28,000); the remaining $20,000 came from county funds. "The bridge spans proper will be identical for each site," the bureau reported in 1934. "But the road approaches, dikes, jetties and protection work will vary according to the requirements of the topography of each individual site." Both the Brule (Project SAB-870) and Roscoe (Project SAB-869) structures were 7-span steel I-beam stringers, supported by concrete piers in the river's channel, with steel pile bent piers in the floodplain. The Roscoe Bridge required 1463 cubic yards of concrete, 3234 feet of steel piling, 81,035 pounds of reinforcing steel, 14,225 pounds of steel in the piers and 281,645 pounds of steel in the superstructure. Proposals to erect the two structures were received on September 28, 1934, with the understanding that work would be completed by the following April. Employing steel fabricated at the McClintic - Marshall Corporation's Chicago plant, both structures were duly completed by the spring of 1935. The Roscoe Bridge has carried traffic since, in essentially unaltered condition.

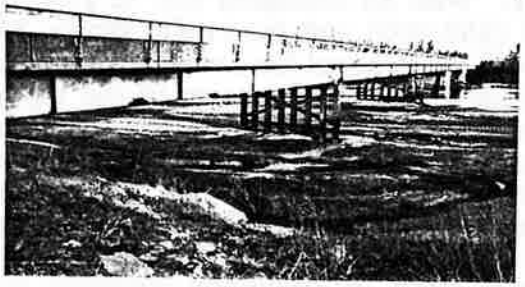
Built in 1934-1935, the Brule and Roscoe State Aid Bridges were among the final projects to receive such state funding. Soon after their erection, the State Aid Bridge fund was phased out, ceasing entirely in 1936. The two structures are thus historically significant as regionally important crossings of the Platte River and as the most recent of the existing state aid bridges in Nebraska. They are technologically significant as examples of long-span beam construction in the state. As early as 1932 the bureau of roads began experimenting with cantilever stringer design as an alternative to truss or transverse joist girder configurations. "These bridges [Brule and Roscoe] will mark a distinct advance in State-Aid bridge design on the South Platte River," the bureau stated. The two structures demonstrated not only the economy and durability of such steel stringer design, but the speed with which it could be erected. The subsequent alterations to the Brule Bridge (KEIT01) tends to enhance the significance of the Roscoe State Aid Bridge. It is today one of the more important of Nebraska's later highway spans.

NAME(S) OF STRUCTURE
Roscoe State Aid Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number SL51A00068; Department of Roads and Irrigation, **Twentieth Biennial Report**, 1933-1934, pp. 86, 89, 90; Aivars G. Ronis, "Nebraska State Aid Bridges," typewritten report by Nebraska Department of Roads, June 1971, revised 1978; "500'0" Multiple Deck Steel Girder Spans, Roscoe State Aid Bridge," Nebraska Department of Roads and Irrigation, original construction drawings, September 1934, located at Nebraska Department of Roads, Lincoln, Nebraska; field inspection by Clayton Fraser, 2 May 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Middle Creek Bridge
NDOR: C005201505P

KEYA01

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
county road over East Middle Creek; S29/32, T33N, R23W
16.2 miles southwest of Springview; Keya Paha County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 27)

CONDITION
good

OWNER
Keya Paha County

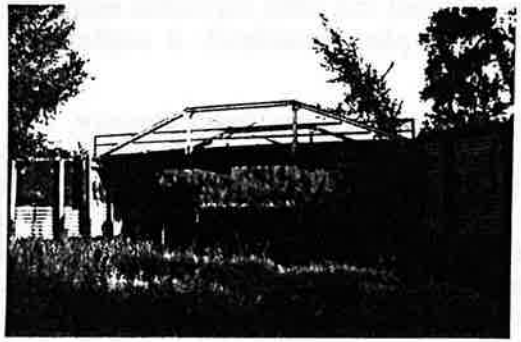
span number:	1	superstructure:	steel, 3-panel pin / rigid-connected Pratt pony truss
span length:	50.0'	substructure:	steel pile bent abutments with (new) steel sheet piling back- and wingwalls
total length:	52.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	15.8'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 punched rectangular eyebars; vertical: 2 channels with lacing; diagonal: 2 eyerods with turnbuckles; lateral bracing: round rod with threaded ends; floor beam: I-beam, field bolted to vertical below lower chord pin; guardrail: 2 angles

Located some 16 miles southwest of Springview in southwestern Keya Paha County, this small-scale bridge carries an unpaved county road across East Middle Creek. The structure is configured as a single-span, pinned Pratt pony truss with the bolted upper chord/vertical gusset plates that are indicative of state standardized design. Comprised of steel components rolled in Pittsburgh by Jones and Laughlin, the truss was fabricated ca.1915. The Western Bridge and Construction Company of Omaha built virtually all of the county's steel bridges during this period and likely erected this structure. The structural integrity of the Middle Creek Bridge has been compromised substantially by the complete replacement of its substructure. Because of this alteration and the lack of documentation, this bridge appears to lack appreciable levels of either integrity or significance.

NAME(S) OF STRUCTURE
Middle Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION

LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C005201505P; field inspection by Clayton Fraser, 8 August 1990.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Thomas Creek Bridge
NDOR: C005203805P

KEYA02

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over Thomas Creek; S20, T33N, R20W
7.2 miles southeast of Springview; Keya Paha County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 19)

CONDITION
good

OWNER
Keya Paha County

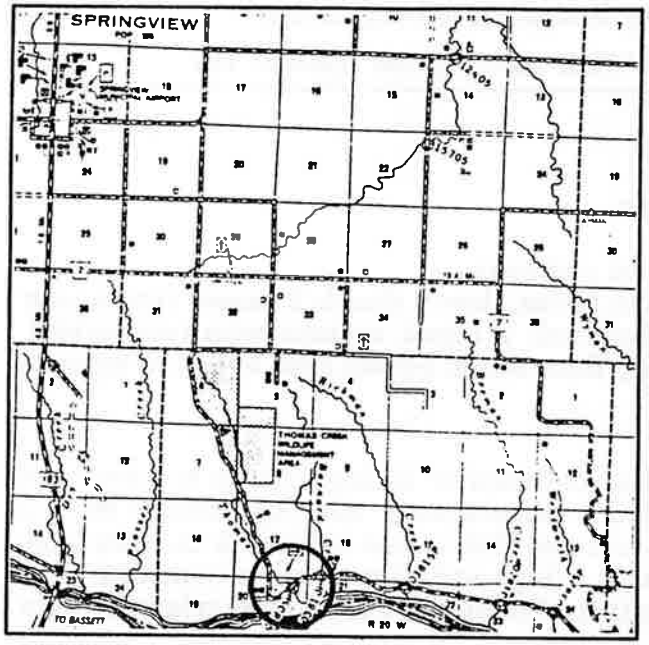
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt pony truss
span length:	35.0'	substructure:	timber pile bent abutments and wingwalls
total length:	40.0'	floor/decking:	earth-covered corrugated steel deck over steel stringers
roadway wdt.:	15.9'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 round eyebars with turnbuckles; lateral bracing: round bar with threaded ends; floor beam: I-beam field bolted to vertical; guardrail: lattice

This small-scale bridge carries a gravel-surfaced county road over Thomas Creek seven miles southeast of Springview, in south-central Keya Paha County. The structure is a single-span, pinned Pratt pony truss, supported by a timber substructure. Although county records of the period do not mention this structure specifically, the truss's detailing and dimensions indicate that it was fabricated ca.1910 from a standard design of the state engineer. Both the Standard Bridge Company and the Western Bridge and Construction Company were active in Keya Paha during that time; the Thomas Creek Bridge could have been erected by either. Today the truss carries relatively light traffic in this sparsely settled region, without any substantial alterations.

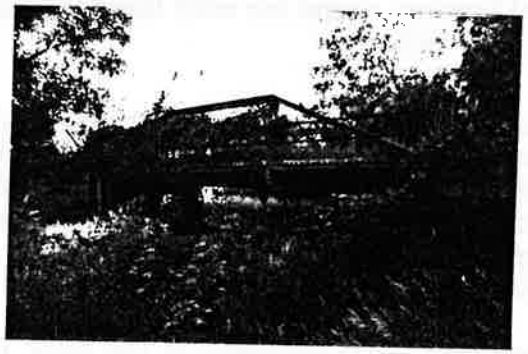
The Thomas Creek Bridge typifies short-span truss construction in Nebraska in the early 1900s. Built by one ofthe state's most prolific erectors during a time of intense bridge construction activity, it fits well within the mainstream of technological trends for the period. Lacking any major historical significance in its present location and typifying an exceedingly common structural type in Nebraska, the Thomas Creek Bridge displays only marginal historical or technological significance.

NAME(S) OF STRUCTURE
Thomas Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C005203805P; field inspection by Clayton Fraser, 8 August 1990.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Lewis Bridge [Keya Paha River Bridge] KEYA03
NDOR: C005205705P

DATE(S) OF CONSTRUCTION
1922

LOCATION
county road over the Keya Paha River; S23, T35N, R20W
13.6 miles northeast of Springview; Keya Paha County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 39)

CONDITION
good

OWNER
Keya Paha County

span number: 2
span length: 60.0'
total length: 165.0'
roadway wdt.: 15.0'

superstructure: steel, 4-panel, pin-connected Pratt pony truss with steel stringer approach span
substructure: steel pile bent abutments and piers with timber and steel sheet piling wingwalls
floor/decking: corrugated steel deck over transverse joist floor system
other features: upper chord: 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 looped rectangular eyebars; counter: 1 round eyerod with turnbuckle; lateral bracing: round bar with threaded ends; floor beam: I-beam, bolted to vertical below lower chord (floor beams support rolled I-beam girders, laid longitudinally, which support transverse stringers); guardrail: 2 angles

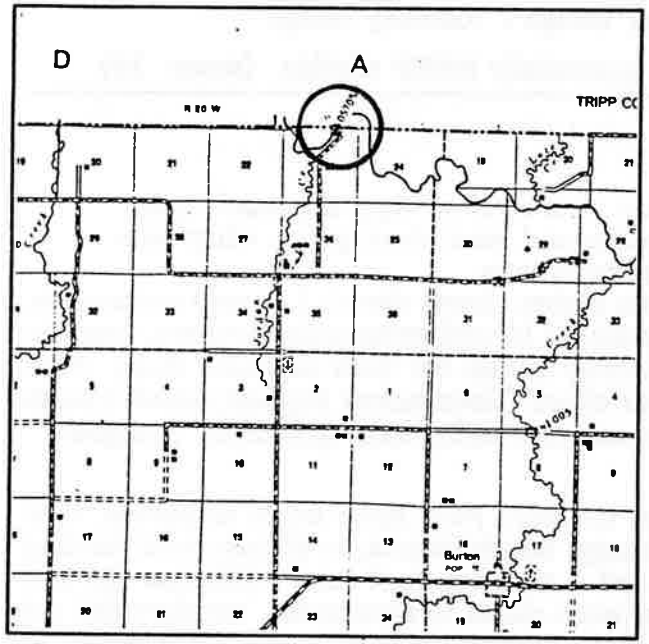
In June 1911, the Keya Paha County Commissioners first discussed the need for a bridge over the Keya Paha River north of Burton, near the South Dakota state line. Three months later they met with representatives from Tripp County, South Dakota, to discuss joint funding of the bridge's construction. No apparent action resulted from these discussions, however, and it was not until June 1920 that the two counties met again to discuss the legalities of building the state-line bridge. The two groups were closer to agreement, but they did not undertake actual construction of the bridge until early in 1922. That March the Standard Bridge Company was awarded a contract to erect this two-span pony truss structure, supported by a steel pile bent substructure. The contract price was $7700, to be divided equally between the two counties. Using steel components rolled in the Cambria mills of Pittsburgh, the Omaha-based bridge firm completed the Lewis Bridge, as it was called locally, by November 1922. The structure featured typical state-standard Pratt trusses, but onto these the bridge company overlaid a transverse joist girder floor system, a hallmark configuration of the Standard Bridge Company. Since its completion, the Lewis Bridge has functioned unaltered at this seldom-used crossing.

The northernmost bridge in the statewide bridge inventory, the Lewis Bridge typifies the Standard Bridge Company's penchant for transverse joist girder construction. The company's president, Robert Z. Drake, had pioneered the development of this configuration early in the 20th century, and it was used extensively throughout the state - by Standard Bridge as well as other in-state bridge erectors - as a freestanding structural type. (Over 1,000 transverse joist girder bridges had been built in Nebraska by 1927, by one report.) The combination of truss and girder technologies that characterizes the Lewis Bridge is a peculiar - and structurally redundant - engineering trait, apparently employed only by the Standard Bridge Company. A handful of these hybrid bridges remains in use today on Nebraska's secondary roads. The Lewis Bridge is distinguished as one of the best-preserved and thoroughly documented among these.

NAME(S) OF STRUCTURE

Lewis Bridge [Keya Paha River Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C005205705P; Keya Paha County Commissioners' Record, Book 1: 19 June 1911 (pages 334-35), 18 September 1911 (page 350); Book 2: 2 June 1920 (page 38), 22 June 1920 (page 40), 7 February 1922 (page 77), 24 March 1922 (page 80), 31 October 1922 (page 91), located at Keya Paha County Courthouse, Springview, Nebraska; field inspection by Clayton Fraser, 8 August 1990.

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C005213410

KEYA04

DATE(S) OF CONSTRUCTION
ca.1905

LOCATION
county road over unnamed stream; S1/12, T33N, R22W
6.5 miles southwest of Springview; Keya Paha County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 28)

CONDITION
fair

OWNER
Keya Paha County

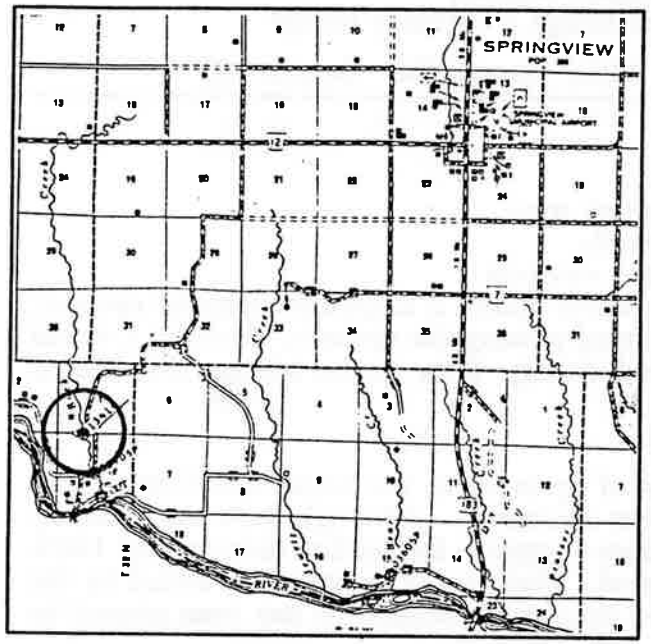
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt half-hip pony truss
span length:	40.0'	substructure:	steel pile bent abutments with timber wingwalls
total length:	40.0'	floor/decking:	earth-covered corrugated steel deck over steel stringers
roadway wdt.:	15.8'	other features:	upper chord: 2 channels with batten plates; lower chord: 2 looped rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 looped rectangular eyebars; counter: 1 round eyebar with turnbuckle; lateral bracing: round bar; floor beam: I-beam U-bolted to vertical; guardrail: lattice

This small-scale bridge carries a gravel-surfaced road across an intermittent stream southwest of Springview, the Keya Paha County seat. The structure consists of a single pinned Pratt half-hip pony truss, supported by steel pile bent abutments. Although Keya Paha County records of the period do not mention this bridge specifically, the truss's detailing and dimensions suggest a fabrication date around 1905. The Standard Bridge Company of Omaha held the county's annual contracts during this period. Made up of components rolled by the Cambria Steel Company of Pittsburgh, this truss displays the earmarks of a Standard Bridge Company structure. It has been altered by the replacement of its original timber deck with corrugated steel.

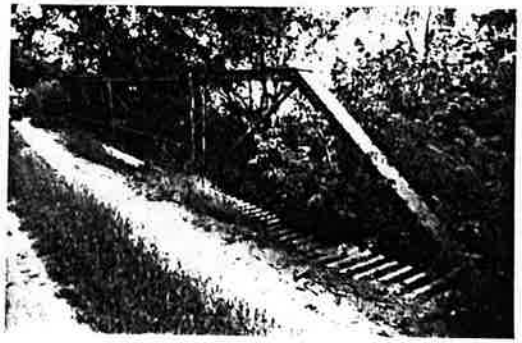
The Standard Bridge Company, like many other midwestern bridge erectors, marketed the Pratt half-hip pony truss extensively in the early 1900s. Lacking a vertical at the hip connection, it was slightly lighter - and thus cheaper to fabricate - than the standard Pratt truss. The state engineer's office did not adopt the half-hip designs a state standard, however, and as the counties began using the state standards increasingly in the mid-1910s, erection of half-hip ponies decreased rapidly. Nevertheless, numerous half-hip trusses remain in use on Nebraska's secondary roads today. With its construction history largely undocumented, this bridge is not one of the more noteworthy examples.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C005213410; field inspection by Clayton Fraser, 8 August 1990.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Burton Bridge [Keya Paha River Bridge] KEYA05
NDOR: C005216705

DATE(S) OF CONSTRUCTION
1912

LOCATION
county road over the Keya Papa River; S27/28, T35N, R19W
5.0 miles north of Burton; Keya Paha County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 46)

CONDITION
good

OWNER
Keya Paha County

span number: 1
span length: 140.0'
total length: 141.0'
roadway wdt.: 19.8'

superstructure: steel, 8-panel, pin-connected Pratt through truss
substructure: steel pile bent abutments and timber wingwalls
floor/decking: corrugated steel decking over steel stringers
other features: upper chord: 2 channels with cover plates and double lacing; lower chord: 2 punched rectangular eyebars; vertical: 2 channels with lacing; diagonal: 2 punched rectangular eyebars; 1 square eyebar with turnbuckle; lateral bracing: round bar with threaded ends; strut: steel beam knee braced; floor beam: I-beam field bolted to vertical; guardrail: 2 angles

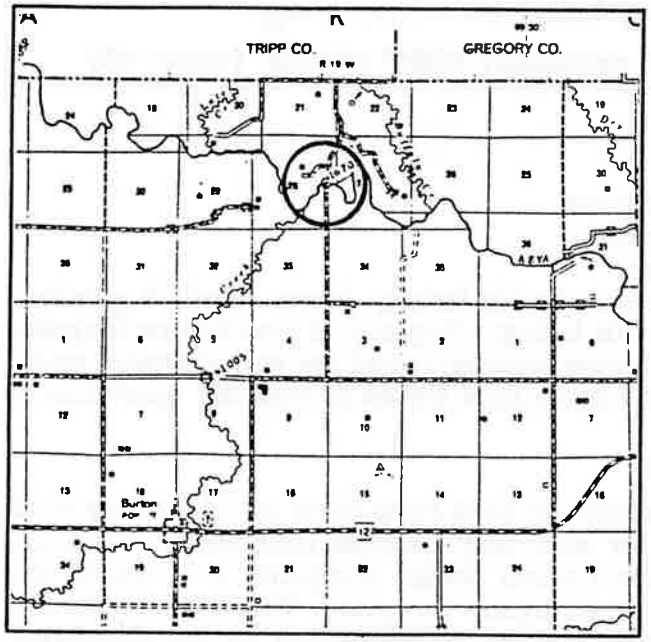
In late spring of 1912, the Keya Paha County Commissioners acted to erect a new bridge across the Keya Paha River on the county road five miles north of the crossroads community of Burton. On July 10th, after advertising for bids, they received competitive proposals for the Burton Bridge and another major span from the Monarch Engineering Company, the Canton Bridge Company, S.D. Stuart, the Midland Bridge Company, the Beach Construction Company and the Western Bridge and Construction Company. The contract for the Burton Bridge was awarded to Western Bridge, low bidder at $2097. The Omaha-based contractor began excavation for the abutments soon thereafter, and, using components rolled by the Cambria Steel Company of Pittsburgh, Western Bridge completed this structure by year's end. As built, the Burton Bridge was composed of a single pinned Pratt through truss, supported by a steel pile bent substructure. The original timber deck has more recently been replaced with corrugated steel, but the truss stands otherwise intact.

Built from standard designs promulgated by the Nebraska State Engineer and virtually all of the major in-state bridge contractors, the pinned Pratt through truss was the span of choice for medium-span applications in the late 19th and early 20th centuries. Numerous Pratts were built over such watercourses as the Keya Paha River, the Loup River, Ponca Creek, the Big Blue River and the Niobrara River (in its upper reaches), and several of these remain in use today. Erected in 1912 with a 140-foot span, the Burton Bridge fits well within the milieu of truss construction in the state. It is distinguished as one of the better documented examples among Nebraska's pinned Pratt trusses. As one of the few bridges over the Keya Paha River in this sparsely settled part of the state, the Burton Bridge forms a regionally important crossing.

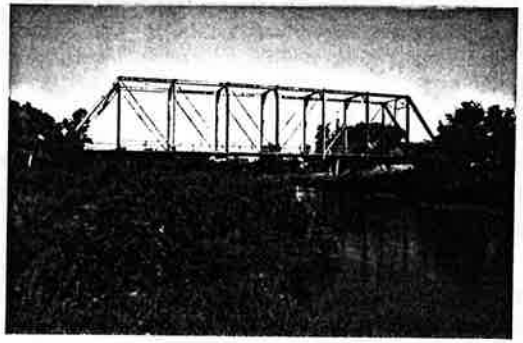
NAME(S) OF STRUCTURE

Burton Bridge [Keya Paha River Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C005216705; Keya Paha County Commissioners' Record, Book 1: 10 July 1912 (pages 373-73), 6 August 1912 (page 375), 8 January 1913 (page 387), located at Keya Paha County Courthouse, Springview, Nebraska; field inspection by Clayton Fraser, 8 August 1990.

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Verdigris Creek Bridge KNOX01
NDOR: C005400915

DATE(S) OF CONSTRUCTION
ca.1930

LOCATION
township road over North Branch of Verdigris Creek; S34/35, T31N, R8W
9.5 miles west, 1.4 miles north of Verdigre; Knox County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 16)

CONDITION
good

OWNER
Knox County

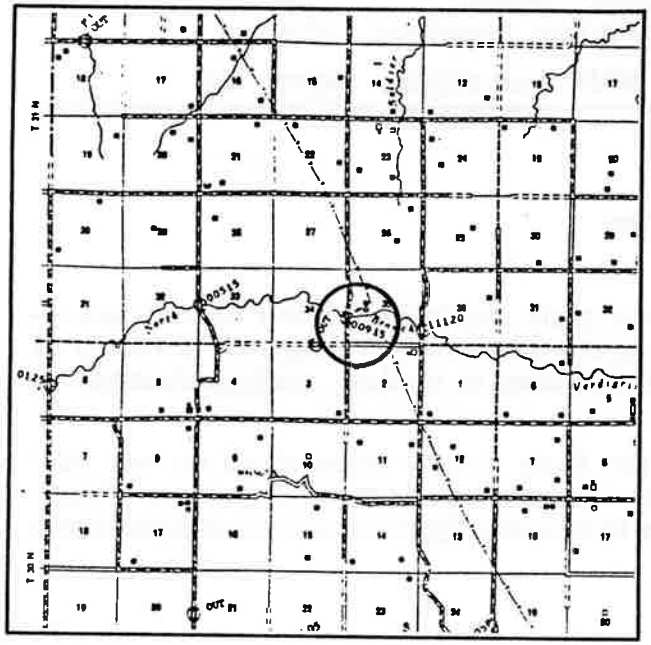
span number: 1
span length: 100.0'
total length: 102.0'
roadway wdt.: 17.9'

superstructure: steel, 5-panel, rigid-connected Pratt pony truss
substructure: timber wing walls and abutments
floor/decking: timber deck over I-beam stringers
other features: upper chord: back-to-back channels with cover plate and lacing; lower chord: back-to-back channels with battens; vertical: 4 angles with battens; diagonal: a variety of channels and angles; floor beam: I-beam, field bolted to vertical; railing: channel

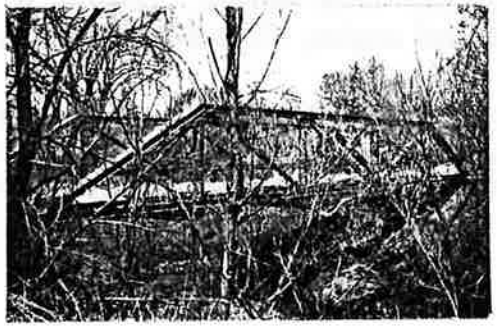
This bridge lies north-south over the north branch of Verdigris Creek. Proceedings of the Knox County Supervisors do not refer specifically to this bridge. It appears to have been significantly modified, perhaps completely built from parts of other bridges. Representing a common structural type and substantially altered, the Verdigris Creek Bridge appears to lack any appreciable level of significance or physical integrity.

NAME(S) OF STRUCTURE
Verdigris Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C005400915; Proceedings of the Knox County Supervisors, 1889-1918, Knox County Courthouse, Center, Nebraska; field inspection by Charlene K. Roise, 22 April 1990.

INVENTORIED BY
Charlene K. Roise

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Ponca Creek Bridge
NDOR: C005401010P

KNOX02

DATE(S) OF CONSTRUCTION
ca.1920

LOCATION
county highway over Ponca Creek; S25, T33N, R8W
0.1 mile west of Verdel; Knox County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 24)

CONDITION
good

OWNER
Knox County

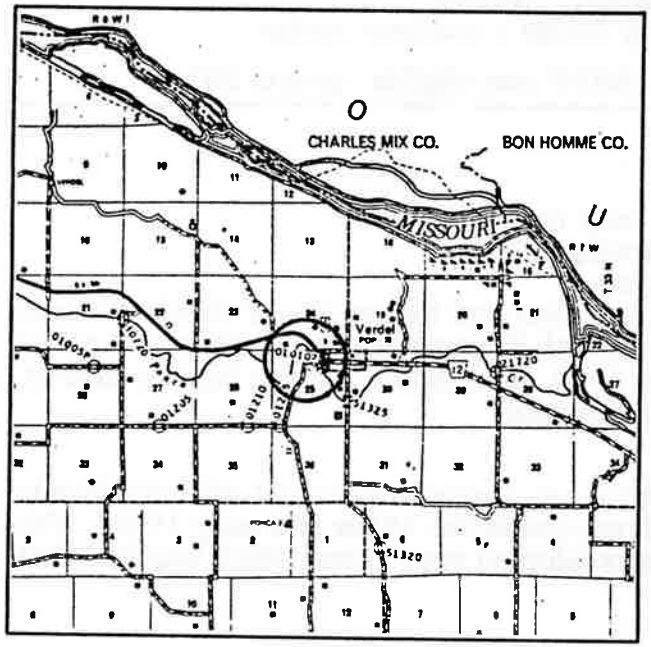
span number:	1	superstructure:	steel, 5-panel, pin- / rigid-connected Pratt pony truss
span length:	80.0'	substructure:	steel pile abutments with timber back- and wingwalls
total length:	81.0'	floor/decking:	double-layer timber deck over I-beam stringers
roadway wdt.:	16.0'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: 2 looped eyebars; vertical: 4 angles with battens; diagonal: 2 looped eyebars; counter: 2 round eyerods with turnbuckles; bracing: through deck; floor beam: I-beam; bottom laterals: round rods with threaded ends; railings: 2 channels

This bridge carries an east-west county highway over Ponca Creek. Proceedings of the Knox County Supervisors do not refer specifically to this bridge, but the style is similar to several state standard plans for Pratt pony trusses developed in the 1910s and early 1920s. The 16-foot roadway width also indicates that it was probably built after 1912, when the county adopted state plans which required that width as a minimum.

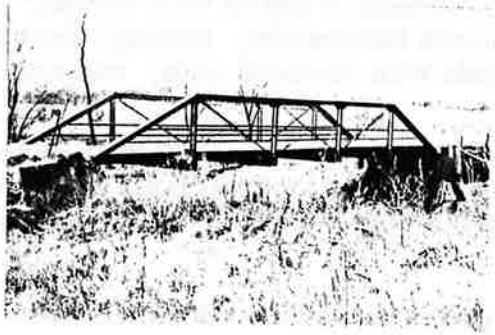
The Ponca Creek Bridge is typical of the small pony trusses built in Nebraska in the late 1910s and early 1920s.

NAME(S) OF STRUCTURE
Ponca Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C005401010P; Proceedings of the Knox County Supervisors, 1889-1918, Knox County Courthouse, Center, Nebraska; field inspection by Charlene K. Roise, 22 April 1990.

INVENTORIED BY
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Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Squaw Creek Bridge
NDOR: C005401605P

KNOX03

DATE(S) OF CONSTRUCTION
ca.1920

LOCATION
township road over Squaw Creek; S7, T32N, R8W
5 miles west, 3.7 miles south of Verdel; Knox County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 15)

CONDITION
good

OWNER
Knox County

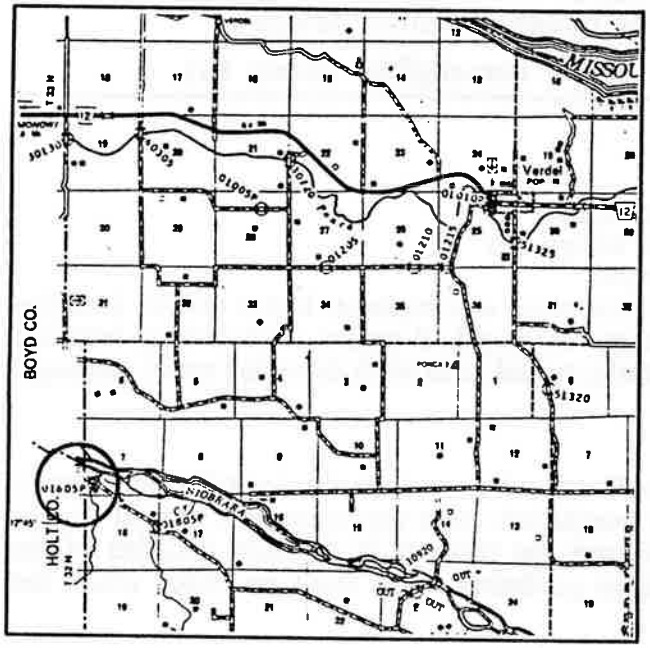
span number:	1	superstructure:	steel, 4-panel, rigid-connected Warren pony truss
span length:	60.0'	substructure:	steel pile abutments with timber back- and wingwalls
total length:	61.0'	floor/decking:	double-layer timber deck over I-beam stringers
roadway wdt.:	15.6'	other features:	upper chord: back-to-back channels with cover plate and battens; lower chord: 2 angles with battens; vertical: 2 angles with battens; diagonal: 2 angles with lacing; bracing: outriders; floor beam: I-beam; bottom laterals: round rods with threaded ends; railings: lattice

This bridge carries an east-west township road over Squaw Creek. Proceedings of the Knox County Supervisors do not refer specifically to this bridge. According to county highway superintendent Don Jiracek, the bridge was purchased from the state and moved to this site in 1968. Its original site is unknown. Although Warren trusses gained popularity around the country in the first decades of the twentieth century, Nebraska maintained a strong preference for the Pratt form. This bridge probably dates from ca.1920, when the Warren design began to appear more around the state.

This bridge proves the mobility and adaptability of trusses bridges, one of the notable reasons for their widespread use. Unfortunately, little is known about the background of this structure.

NAME(S) OF STRUCTURE
Squaw Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C005401605P; Proceedings of the Knox County Supervisors, 1889-1918, Knox County Courthouse, Center, Nebraska; phone interview with Don Jiracek, Knox County Highway Superintendent, 18 May 1990; field inspection by Charlene K. Roise, 22 April 1990.

INVENTORIED BY
Charlene K. Roise

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Verdigris Creek Bridge
NDOR: C005401715

KNOX04

DATE(S) OF CONSTRUCTION
ca.1920

LOCATION
county highway over Middle Branch, Verdigris Creek; S28/29, T30N, R7W
6 miles west, 3.7 miles south of Verdigre; Knox County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 26)

CONDITION
good

OWNER
Knox County

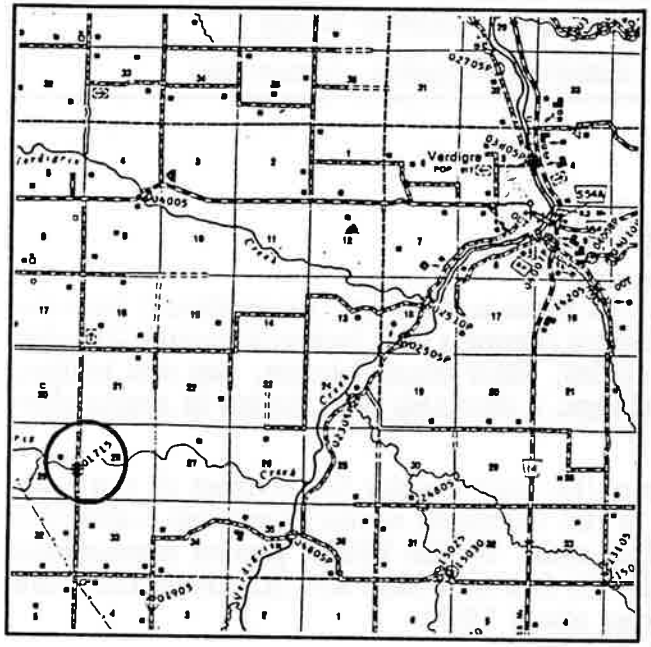
span number:	1	superstructure:	steel, 8-panel, rigid-connected Parker through truss
span length:	150.0'	substructure:	steel pile abutments with timber back- and wingwalls
total length:	152.0'	floor/decking:	double-layer timber deck over I-beam stringers
roadway wdt.:	16.3'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: back-to-back channels with battens; vertical: back-to-back channels with lacing; diagonal: 2 angles with battens; portal and sway bracing: 2 angles; floor beam: I-beam; top and bottom laterals: round rods with threaded ends; railings: 2 channels with Armco at approaches

This bridge carries an unpaved road over the Middle Branch of Verdigris Creek. Proceedings of the Knox County Supervisors do not refer specifically to this bridge. Most through trusses built in Nebraska in the first two decades of the twentieth century were pin-connected Pratts. Parker trusses began appearing by the mid-1910s, but were usually pin-connected as well. By the 1920s, pinned connections were largely superseded by rigid connections. Later in that decade, roadways were typically 20 feet or wider, and structural members were heavier than those of the Verdigris Creek Bridge. The bridge thus appears to date from about 1920.

Through trusses are relatively uncommon in Nebraska, and Parker through trusses are rarer still. Of the three Parker trusses in Knox County, this is the only one featuring rigid connections.

NAME(S) OF STRUCTURE
Verdigris Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C005401715; Proceedings of the Knox County Supervisors, 1889-1918, Knox County Courthouse, Center, Nebraska; field inspection by Charlene K. Roise, 22 April 1990.

INVENTORIED BY
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DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge KNOX05
NDOR: C005401905P

DATE(S) OF CONSTRUCTION
ca.1946

LOCATION
township road over intermittent stream; S10, T29N, R7W
8.1 miles west, 0.4 mile south of Winnetoon; Knox County, Nebraska

USE (ORIGINAL / CURRENT)
military bridge / roadway bridge

RATING NRHP non-eligible (score: 23)

CONDITION
good

OWNER
Knox County

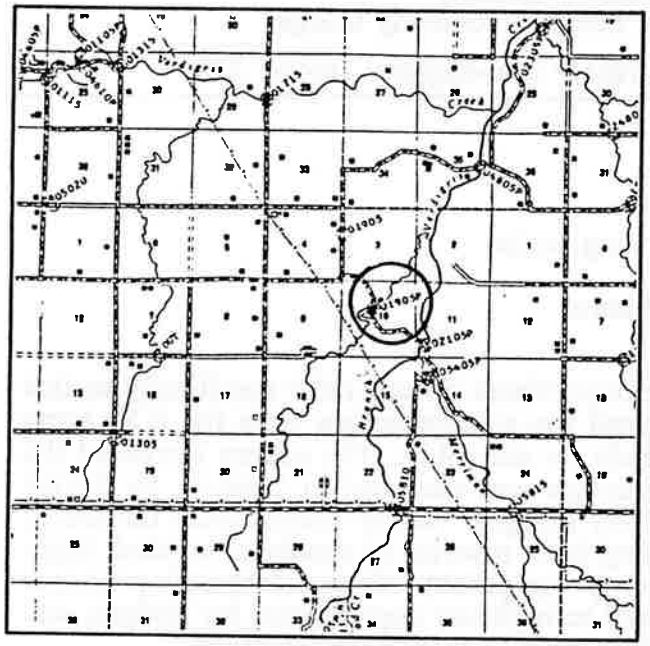
span number:	1	superstructure:	Bailey deck truss
span length:	70.0'	substructure:	steel pile abutments with timber back and wing walls
total length:	72.0'	floor/decking:	timber over deck transverse I-beams
roadway wdt.:	15.8'	other features:	truss components mostly angles; railings: channel

This bridge carries an unpaved road over a small stream. Proceedings of the Knox County Supervisors do not refer specifically to this bridge. Don Jiracek, Knox County highway superintendent, reports that the county purchased the superstructure from the U.S. Army Corps of Engineers after World War II for $1.00. The components arrived in wood crates ready for assembly. The county increased the width from 12 to 16 feet by running I-beam transverse joists between the trusses. The structure was designed in 1940-41 by British engineer Donald Bailey in response to the wartime need for portable, easy-to-assemble military bridges. Bailey trusses were fabricated by five companies in the United States, as well as a number of firms in England. By selecting from a series of standard, welded, high-tensile structural steel panels, troops could construct a bridge quickly without the aid of heavy equipment. Over 1,500 Bailey bridges were created during the war. In the decade following the war, surplus Bailey trusses were sold to highway departments for bridges, and the trusses were also adapted for use as river piers, structural roof girders, and falsework for concrete bridge construction.

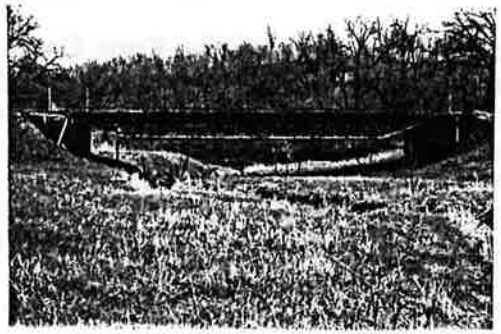
Although this bridge is of more recent construction than the usual 50 year cut-off for National Register eligibility, the date of the design's conception is now past that threshold. There is only one other Bailey bridge known to exist in Nebraska (**WASH05**). The bridge serves as an example of the transfer of technology from war time to peace time, from military to civilian. Given the design, the history of its development, and its role in the post-war transition, this bridge has an important place in the chronicle of Nebraska's bridges.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C005401905P; Proceedings of the Knox County Supervisors, 1889-1918, Knox County Courthouse, Center, Nebraska; phone interview with Don Jiracek, 18 May 1990; "Bailey Bridging in Peacetime," **Engineering** 178 (13 August 1954): 218-20; "The Evolution of the Bailey Bridge," **Engineering** 162 (13 September 1946): 245; "Fabricating the Bailey Military Bridge," **Engineering News-Record**, 26 July 1945, pp. 104-107; field inspection by Charlene K. Roise, 22 April 1990.

INVENTORIED BY
Charlene K. Roise

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Pischel Creek Bridge
NDOR: C005402205P

KNOX06

DATE(S) OF CONSTRUCTION
ca.1905

LOCATION
township road over Pischel Creek; S26, T32N, R8W
6.5 miles south, 1.5 miles west of Verdel; Knox County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 20)

CONDITION
good

OWNER
Knox County

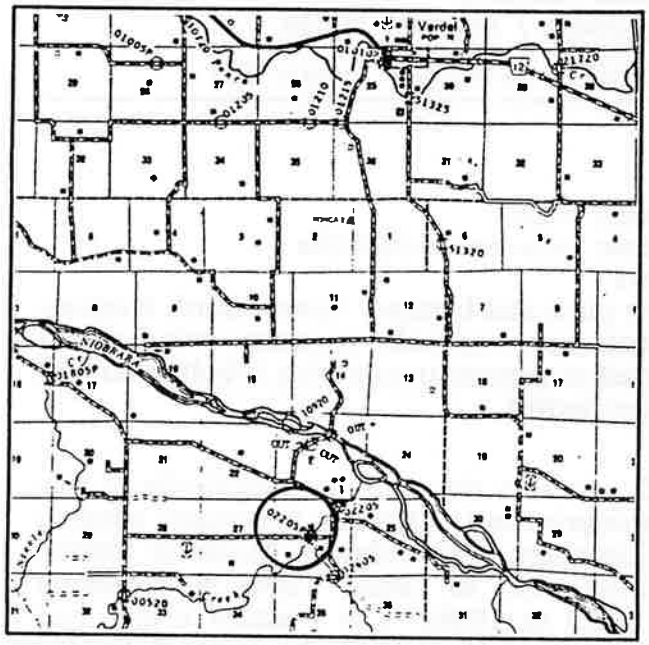
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt half-hip pony truss
span length:	40.0'	substructure:	steel pile abutments with sheet piling or timber back- and wingwalls
total length:	41.0'	floor/decking:	double-layer timber deck over I-beam stringers
roadway wdt.:	17.8'	other features:	upper chord: back-to-back channels with cover plate and battens; lower chord: 2 square eyerods; vertical: 4 angles with lacing; diagonal: square eyerods; counters: round eyerod with turnbuckle; floor beam: I-beam, connected to superstructure with U-bolts; bottom lateral: round rod with threaded ends; railing: lattice

This bridge carries an unpaved road over Pishel Creek. Proceedings of the Knox County Supervisors do not refer specifically to this bridge. Since standard state plans did not include any half-hip designs, however, the bridge dates prior to 1912, when the county adopted state plans. The county began ordering steel bridges in about 1900. The Canton Bridge Company, with John W. Towle of Omaha apparently serving as their agent, received the county's annual bridge building contract from 1897 to 1902. Towle subsequently established a company under his own name and was awarded the county contract from 1903 to 1906. The Western Bridge and Construction Company, also of Omaha, built bridges for the county in 1907 and 1908, and again from 1910 to 1912. James P. Riddle, a contractor from Creighton NE, received the contract in 1909. Any of these firms could have built the structure, although Canton and Western typically affixed plates to their bridges, and this bridge does not show any evidence of a plate. The 18-foot roadway is unusually wide for the early part of the 20th century.

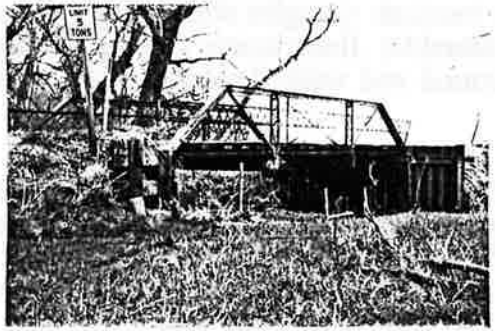
This bridge is typical of the half-hip trusses built in Nebraska prior to state standardization of bridge plans.

NAME(S) OF STRUCTURE
Pischel Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C005402205P; Proceedings of the Knox County Supervisors, 1889-1918, Knox County Courthouse, Center, Nebraska; field inspection by Charlene K. Roise, 22 April 1990.

INVENTORIED BY
Charlene K. Roise

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Howe Creek Bridge
NDOR: C005402610P

KNOX07

DATE(S) OF CONSTRUCTION
ca.1920

LOCATION
county highway (Coll 28C) over Howe Creek; S4, T31N, R4W
2.3 miles west, 2.1 miles south of Lindy; Knox County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 35)

CONDITION
fair

OWNER
Knox County

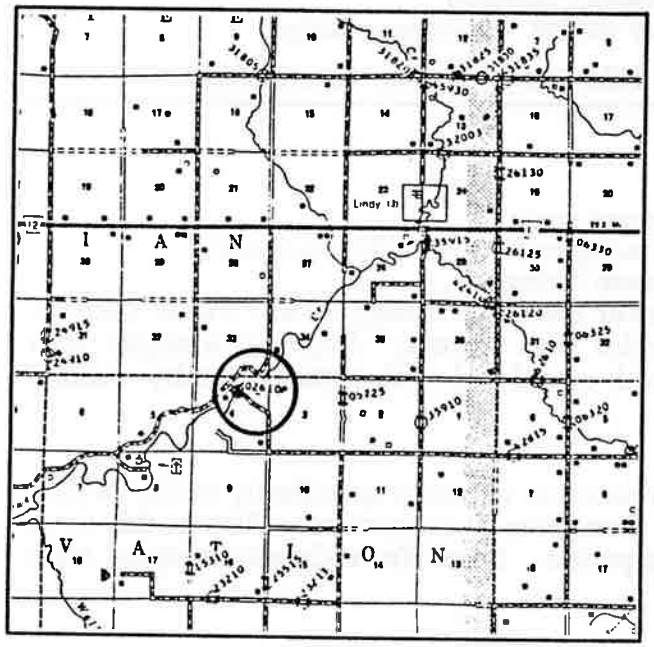
span number:	2	superstructure:	steel, 5-panel, rigid-connected, Camelback pony truss
span length:	100.0'	substructure:	steel pile abutments with timber back- and wingwalls; steel pile bent pier
total length:	201.0'	floor/decking:	concrete deck over corrugated metal on I-beam stringers
roadway wdt.:	19.4'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: back-to-back channels with battens; vertical: 4 angles with battens; diagonal: 2 angles with battens; floor beam: I-beam; bottom lateral: round rod with threaded ends; railing: Armco

This bridge carries a unpaved road over Howe Creek. Proceedings of the Knox County Supervisors do not refer specifically to this bridge. By the mid-1920s, bridges were typically built with 20 foot roadways and with rigid, rather than pinned, connections. Also at this time, the camelback design gained popularity. It thus appears that the bridge dates from this period. Since Knox County adopted state standard bridge plans in 1912, this design was presumably based on state plans.

This bridge is typical of early Camelback trusses built in Nebraska during the late 1910s and early 1920s.

NAME(S) OF STRUCTURE
Howe Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C005402610P; Proceedings of the Knox County Supervisors, 1889-1918, Knox County Courthouse, Center, Nebraska; field inspection by Charlene K. Roise, 20 April 1990.

INVENTORIED BY
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AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Verdigre Bridge [Verdigris Creek Bridge] KNOX08
NDOR: C005403805P

DATE(S) OF CONSTRUCTION
ca. 1910; moved, 1917; reconstructed ca.1922

LOCATION
township road over Verdigris Creek; S5, T30N, R6W
0.2 mile north of Verdigre; Knox County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING determined NRHP eligible (score: 38)

CONDITION
good

OWNER
Knox County

span number: 1
span length: 160.0'
total length: 326.0'
roadway wdt.: 15.7'

superstructure: steel, 9-panel, pin-connected, Parker through truss; steel, 3-panel, Pratt pony truss
substructure: steel pile bent piers; timber abutments, back- and wingwalls
floor/decking: double-layer timber deck over I-beam stringers
other features: Main span -- upper chord: 2 channels with cover plate and lacing; lower chord: 2 looped eyebars; vertical: 2 channels with lacing; diagonal: 2 eyebars; counter: round rod; portal and sway bracing: 2 angles, 2 channels, round rods with turnbuckles; floor beam: I-beam U-bolted to lower chord pins; top and bottom lateral: round rod; railing: 2 angles

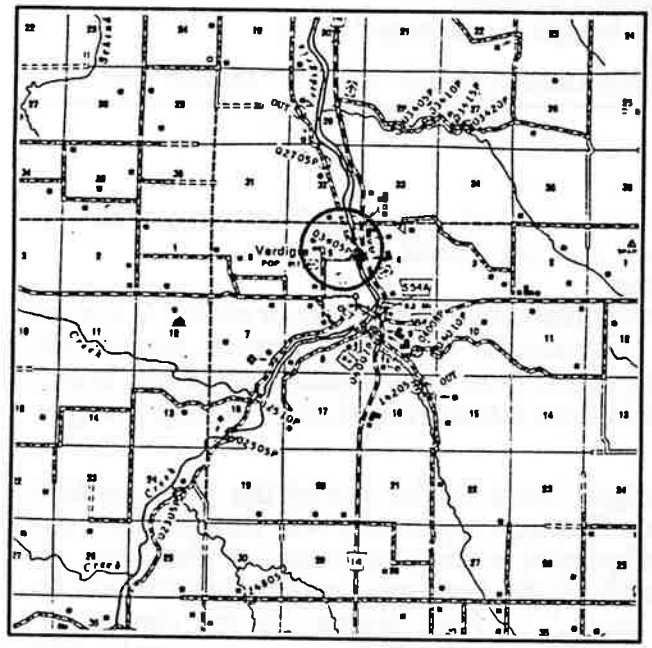
In 1916, the Knox County Supervisors voted to move a bridge from the mouth of the Verdigre Creek to the site of the Verdigre Mill bridge, which had been destroyed. A new bridge was to be built at the mouth of the creek. Footings reportedly still remain from the Verdigre mill bridge, which was located just downstream from this structure, but a new bridge was never constructed at that site. In January 1917, Charles Jones was awarded the contract for moving the bridge from the mouth of the Verdigris, completing the job by March. Among the pieces he moved to the new bridge site near Verdigre were 4 "batter posts," 10 floor beams, 16 top chords, 18 intermediate posts, 36 bottom posts, 34 lateral rods, 10 wind struts, 24 counters, 16 turnbuckles, 38 pins, 10 rollers, 2 portals, 265 planks measuring 3' by 12' by 16' - and 16 "stirrups". The Verdigre Bridge has 16 U-bolts, 4 end posts, 10 floor beams, 16 turnbuckles, and a number of other items which match with the commissions' list. It thus appears that the Verdigre bridge was erected here at that time. The bridge was reportedly reconstructed between 1921 and 1923. Records do not reveal why this occurred so many years after it was moved, but the delay was perhaps due to lack of funds, a perpetual problem for most counties during the period. Severe flooding in 1913, 1914 and 1915 would have exacerbated the monetary dilemma. The bridge was finally put in place under a program initiated by the State Aid Bridge Act of 1911. The Verdigre Bridge carried State Highway 14, the main route through Verdigre, for many years, until a flood annihilated its companion bridge south of town. At that time the route was reworked to bypass Verdigre, and the old road and bridge were downgraded to township status. Because of frequent flooding since the bridge's construction, approach spans and footings for the Parker truss have been redone on a number of occasions. The pony truss was apparently moved from another location in the 1940s or 1950s when a previous approach span washed out.

Through truss bridges are uncommon in Nebraska, and Parker through trusses are even more uncommon. The 160-foot span and the bridge's 326-foot length also mark the structure as noteworthy. The fact that both trusses have been moved does not detract from the bridge's integrity, but rather gives it added significance as a documented example of truss bridge mobility.

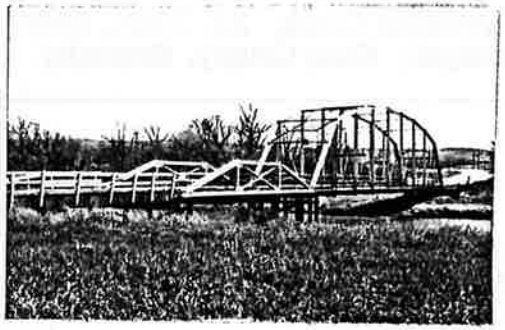
NAME(S) OF STRUCTURE

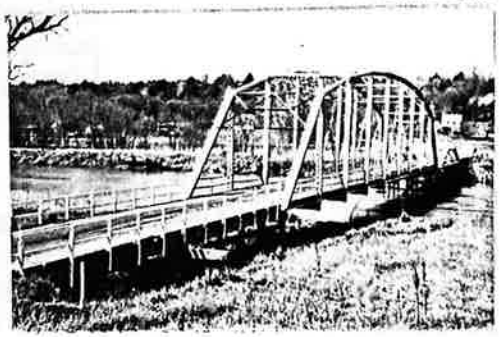
Verdigre Bridge [Verdigris Creek Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C005403805P; Proceedings of the Knox County Supervisors, 1889-1918, Knox County Courthouse, Center, Nebraska, specifically 21 July 1899 (Book 3, page 552), 2 May 1916 (Book 6, page 241), 9 January (Book 6, page 285) and 13 March (Book 6, page 293), 1917; telephone interviews with local historians Misty Mastalir (18 and 22 May 1990) and Ron Dobry (18 and 21 May 1990), and with county highway superintendent Don Jiracek (18 May 1990); State of Nebraska, Department of Roads, "Nebraska State Aid Bridges," typescript report, September 1978; field inspection by Charlene K. Roise, 22 April 1990.

INVENTORIED BY

Charlene K. Roise

AFFILIATION

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Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bazile Creek Bridge
NDOR: C005403915P

KNOX09

DATE(S) OF CONSTRUCTION
ca.1930

LOCATION
county road over Bazile Creek; S20, T32N, R5W
5.8 miles southeast of Niobrara; Knox County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 27)

CONDITION
good

OWNER
Knox County

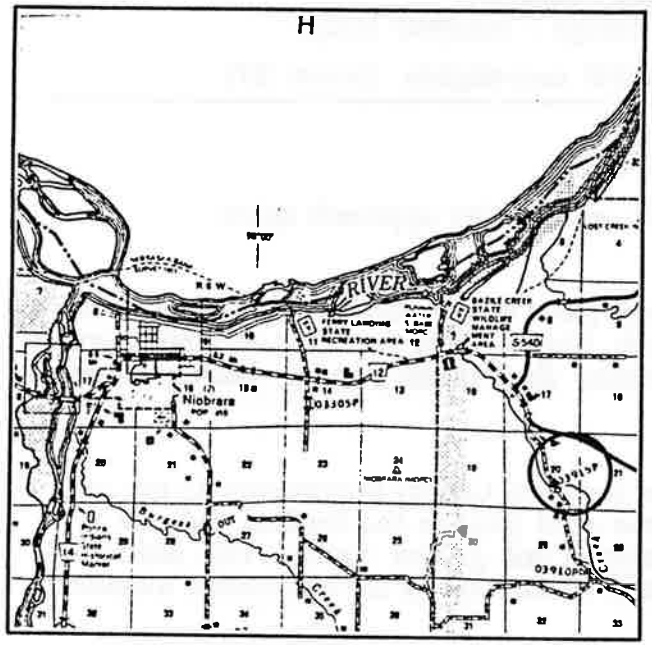
span number:	1	superstructure:	steel, 5-panel, rigid-connected Pratt pony truss, with girder approach spans
span length:	100.0'	substructure:	concrete abutments, back- and wingwalls
total length:	182.0'	floor/decking:	concrete deck over steel stringers
roadway wdt.:	19.8'	other features:	upper chord: back-to-back channels with cover plate and double lacing; lower chord: back-to-back channels with battens; vertical: I-beam built up from 4 angles with continuous plate; diagonal: 2 angles with battens; floor beam: I-beam; bottom lateral: 1 angle; railing: 2 angles

This bridge carries an unpaved road that extends north-south over Bazile Creek. Proceedings of the Knox County Supervisors do not refer specifically to this bridge. Heavy construction, such as the upper chord's double lacing and the solid plate in the vertical, indicate that the bridge was built at least several decades into the 20th century in response to heavier vehicles and greater traffic. This deduction is further reinforced by the riveted connections, which had by and large replaced pins by the mid-1920s, and by the substantial members used for the approach spans.

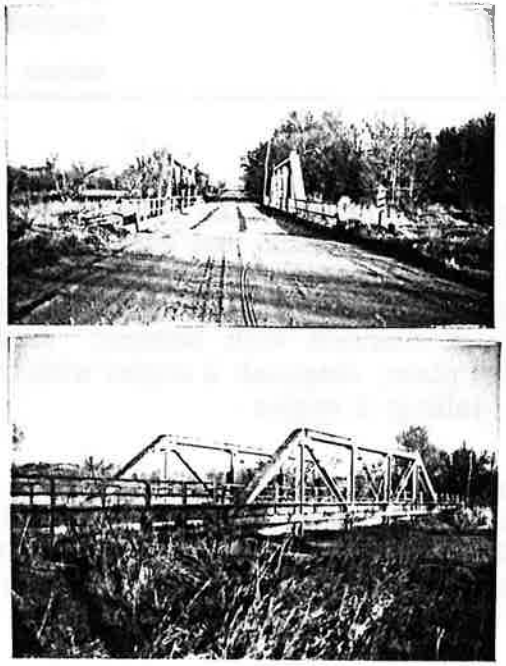
This bridge reflects the trend towards more substantial construction as motor vehicles increased in size and number during the 1920s and 1930s.

NAME(S) OF STRUCTURE
Bazile Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C005403915P; Proceedings of the Knox County Supervisors, 1889-1918, Knox County Courthouse, Center, Nebraska; field inspection by Charlene K. Roise, 20 April 1990.

INVENTORIED BY
Charlene K. Roise

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bazile Creek Bridge
NDOR: C005404120P

KNOX10

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
township road over Bazile Creek; S3, T30N, R5W
0.1 mile southwest of Center; Knox County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 18)

CONDITION
good

OWNER
Knox County

span number: 3
span length: 70.0'
total length: 264.0'
roadway wdt.: 15.7'

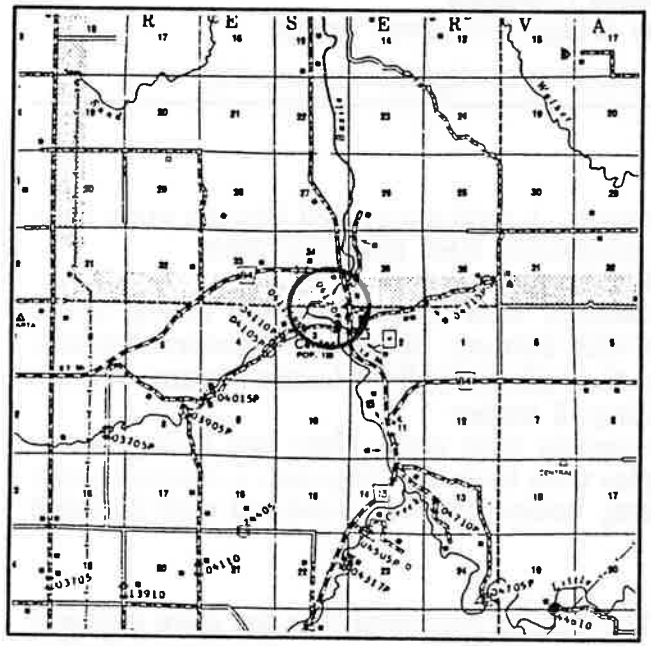
superstructure: 2 steel, 4-panel, pin-connected Pratt pony trusses; 1 rigid-connected Warren pony truss
substructure: steel pile abutments with timber back- and wingwalls; steel pile bent piers
floor/decking: concrete deck over corrugated metal, with I-beam stringers
other features: Pratt trusses: upper chord: back-to-back channels with cover plate and lacing; lower chord: 2 looped eyebars; vertical: 4 angles with battens; diagonal: 2 looped eyebars; counter: round rod with turnbuckle; bracing: through deck; floor beam: I-beam; bottom laterals: round rod with threaded ends; railing: 2 angles
Warren truss: upper chord: back-to-back channels with cover plate and lacing; lower chord: 2 angles with battens; vertical: 4 angles with battens; diagonal: 2 channels with battens; bracing: outrider; floor beam: I-beam; bottom lateral: round rod with threaded ends; railing: 2 channels

This bridge carries an unpaved road at the southwest edge of Center, seat of Knox County. The county requested that the state engineer inspect three new bridges near Center in 1912, the year that the county adopted state standard plans. It is unclear, however, whether the Bazile Creek Bridge was one of these structures. The 16-foot roadway suggests that the bridge was, indeed, built after state plans were used, because the county previously built narrower bridges, for the most part. The Warren truss at the bridge's northeast end is not original to the structure, and perhaps replaces an earlier span damaged by flooding.

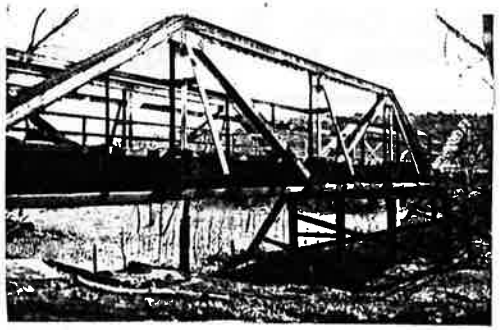
Pin-connected Pratt pony trusses were very common in Nebraska during the first decades of the twentieth century. With its construction history largely undocumented and its physical integrity significantly compromised, the Bazile Creek Bridge is one of the less distinguished examples of this common vehicular truss type.

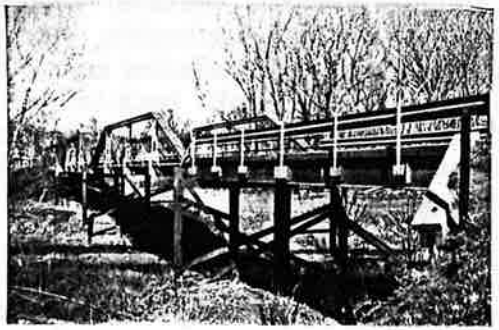
NAME(S) OF STRUCTURE
Bazile Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C005404120P; Proceedings of the Knox County Supervisors, 1889-1918, Knox County Courthouse, Center, Nebraska; field inspection by Charlene K. Roise, 20 April 1990.

INVENTORIED BY
Charlene K. Roise

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Verdigris Creek Bridge KNOX11
NDOR: C005405010

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
township road over Middle Branch of Verdigris Creek; S32/5, T30N/29, R8W
4.7 miles south, 12.1 miles west of Verdigre; Knox County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 35)

CONDITION
good

OWNER
Knox County

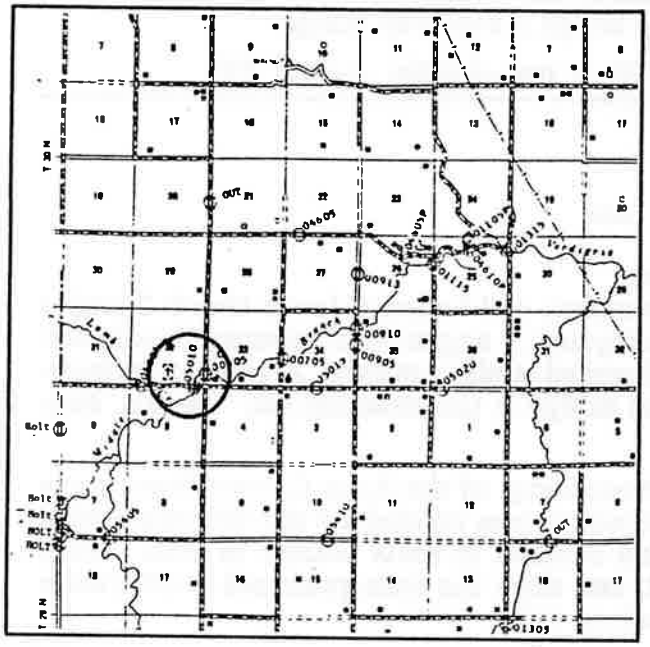
span number:	1	superstructure:	steel, 3-panel, rigid-connected Warren pony truss
span length:	40.0'	substructure:	concrete abutments, back- and wingwalls
total length:	40.0'	floor/decking:	double-layer timber deck over I-beam stringers
roadway wdt.:	15.8'	other features:	upper chord: back-to-back channels with cover plate and battens; lower chord: 2 angles with battens; vertical: 2 angles with lacing; diagonal: 2 angles with battens; floor beam: I-beam; bottom lateral: round rod with threaded ends; railing: 2 angles; endpost-mounted builder's plate: **Built by the Western Bridge & Construction Co. Omaha, Neb.**

This bridge carries an east-west unpaved road over the Middle Branch of Verdigris Creek. Proceedings of the Knox County Supervisors do not refer specifically to this bridge. Endpost-mounted builder's plates indicate that this structure was erected by the Western Bridge and Construction Company of Omaha. Western Bridge received the annual bridge construction contract in Knox County in 1907, 1908, 1910-12, and from 1917 to 1918. Since Knox County adopted state standard plans in 1912, and since the state preferred Pratt trusses to Warrens in the first decades of the twentieth century, this bridge appears to date from before 1912.

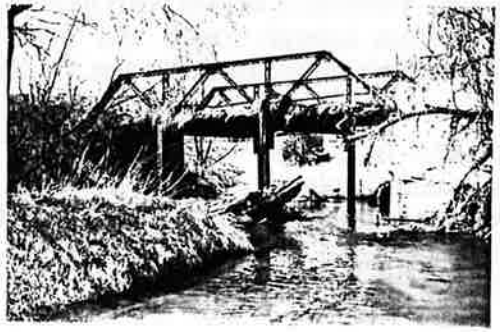
Warren trusses dating from the early twentieth century are somewhat uncommon, since the state preferred Pratts. The survival of the concrete substructure is also noteworthy.

NAME(S) OF STRUCTURE
Verdigris Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C005405010; Proceedings of the Knox County Supervisors, 1889-1918, Knox County Courthouse, Center, Nebraska; field inspection by Charlene K. Roise, 22 April 1990.

INVENTORIED BY
Charlene K. Roise

AFFILIATION
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Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C005405705

KNOX12

DATE(S) OF CONSTRUCTION
ca.1925

LOCATION
county road over intermittent stream; S10/11, T29N, R4W
8.6 miles southwest of Bloomfield; Knox County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 17)

CONDITION
good

OWNER
Knox County

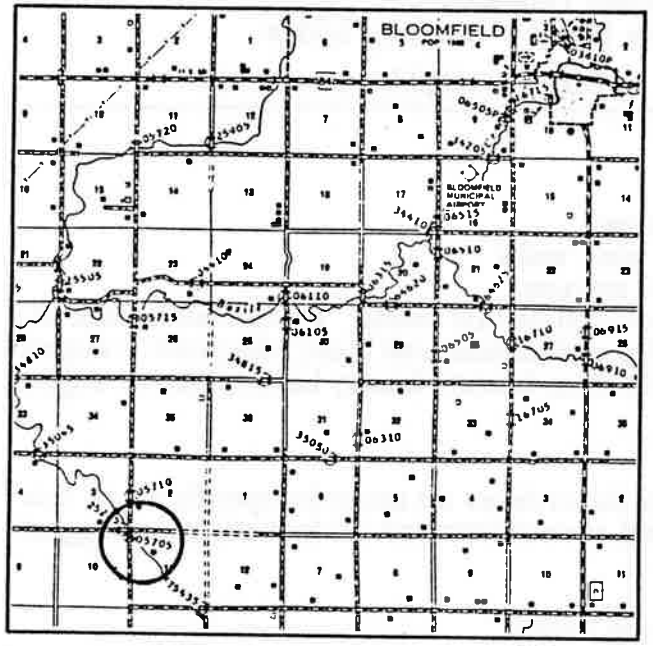
span number:	1	superstructure:	steel, 3-panel, rigid-connected Pratt pony truss
span length:	40.0'	substructure:	steel pile abutments with timber back and wing walls
total length:	41.0'	floor/decking:	earth over corrugated metal deck with steel stringers
roadway wdt.:	20.0'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: back-to-back channels with battens; vertical: 4 angles with continuous plate; diagonal: 2 angles with continuous plate; bracing: through deck; floor beam: I-beam; bottom lateral: angle; railing: 2 channels

This bridge carries a north-south road over a small stream. Proceedings of the Knox County Supervisors do not refer specifically to this bridge. The relatively heavy construction (e.g., solid plates in vertical and diagonals), riveted connections and 20-foot roadway suggest that this bridge was built in the 1920s, when these features were common.

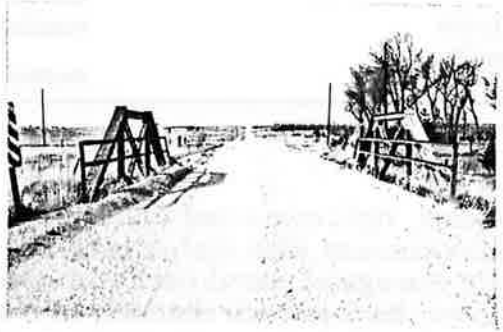
This bridge is typical of small pony trusses built in Nebraska from standard state plans in the 1920s.

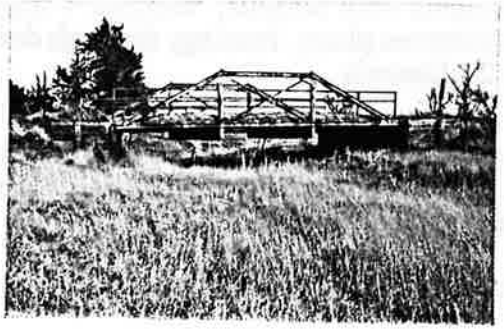
NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C005405705; Proceedings of the Knox County Supervisors, 1889-1918, Knox County Courthouse, Center, Nebraska; field inspection by Charlene K. Roise, 22 April 1990.

INVENTORIED BY
Charlene K. Roise

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Verdigris Creek Bridge
NDOR: C005405810

KNOX13

DATE(S) OF CONSTRUCTION
1936

LOCATION
State Highway 59 over Verdigris Creek; S22/27, T29N, R7W
11 miles west of Creighton; Knox County, Nebraska

USE (ORIGINAL / CURRENT)
highway bridge / highway bridge

RATING NRHP non-eligible (score: 27)

CONDITION
excellent

OWNER
Knox County

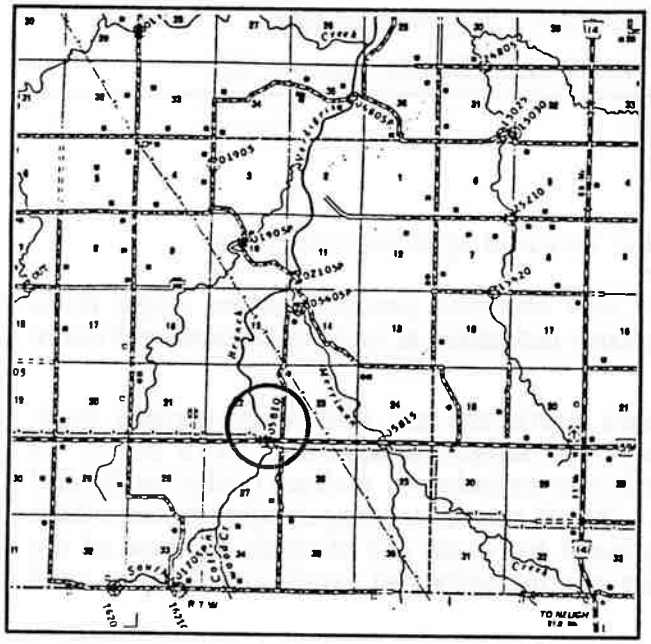
span number:	3	superstructure:	steel, cantilevered stringer
span length:	80.0'	substructure:	concrete abutments with concrete slope walls; concrete spill-through piers
total length:	207.0'	floor/decking:	reinforced concrete deck over steel stringers
roadway wdt.:	24.2'	other features:	5 stringers with I-beam bridging; curb with low concrete parapet carries angle posts supporting deep angle-section railing; railing/curb terminate at ends in streamlined curve

This bridge carries State Highway 59 over Verdigris Creek. Plates affixed to the structure's northeast and southwest corners read: "Capacity 20 Tons, 365-C-1 1936." The 1935-36 **Biennial Report** of the Department of Roads and Irrigation describes "NRS 365-C" as a 1.7 mile project west of Creighton involving grading, gravel and structures. This information is included in a chart outlining federal feeder roads for which contracts were let between January 1, 1935 and October 31, 1936. "NRS" refers to federal relief funds which were made available during this period both to improve road systems and to provide employment for those out of work because of the Depression. Steel stringer bridges were popular in the 1930s, particularly when the principles of continuity and cantilevering were used to increase span length.

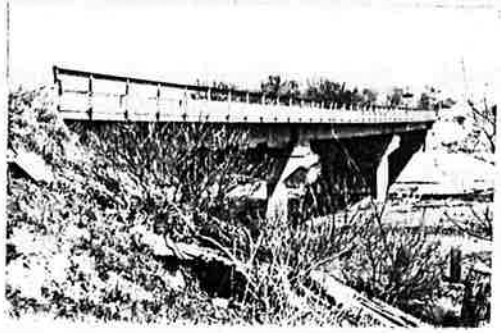
Although the 80-foot span of the Verdigris Creek Bridge is not particularly noteworthy, since Nebraska had built much larger deck steel girder spans by the mid-1930s, the bridge is a well-preserved example of that design, which was widely used throughout the decade. As a cantilevered structure, it is part of a noteworthy subset of steel stringer bridges, many of which were simple spans. It is also a product of the federal relief programs developed to mitigate the massive unemployment caused by the Depression.

NAME(S) OF STRUCTURE
Verdigris Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C005405810; Proceedings of the Knox County Supervisors, 1889-1918, Knox County Courthouse, Center, Nebraska; Nebraska Department of Roads and Irrigation, **Twenty-First Biennial Report**, 1935-36, p. 19; field inspection by Charlene K. Roise, 22 April 1990.

INVENTORIED BY
Charlene K. Roise

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Gross State Aid Bridge [Verdigris Creek Bridge] KNOX14
NDOR: C005413205

DATE(S) OF CONSTRUCTION
1918

LOCATION
county highway over Verdigris Creek; S17/20, T31N, R6W
3.5 miles north, 0.2 miles west of Verdigre; Knox County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 59)

CONDITION
good

OWNER
Knox County

span number:	1	superstructure:	steel, 9-panel, pin-connected Parker through truss
span length:	180.0'	substructure:	concrete abutments, back and wing walls
total length:	182.0'	floor/decking:	double-layer timber deck over I-beam stringers
roadway wdt.:	15.8'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: 2 punched eyebars; vertical: back-to-back channels with lacing; diagonal: eyebars; counter: square rod with turnbuckle; portal and sway bracing: back-to-back angles; floor beam: I-beam; bottom lateral: square rod; railing: 2 channels

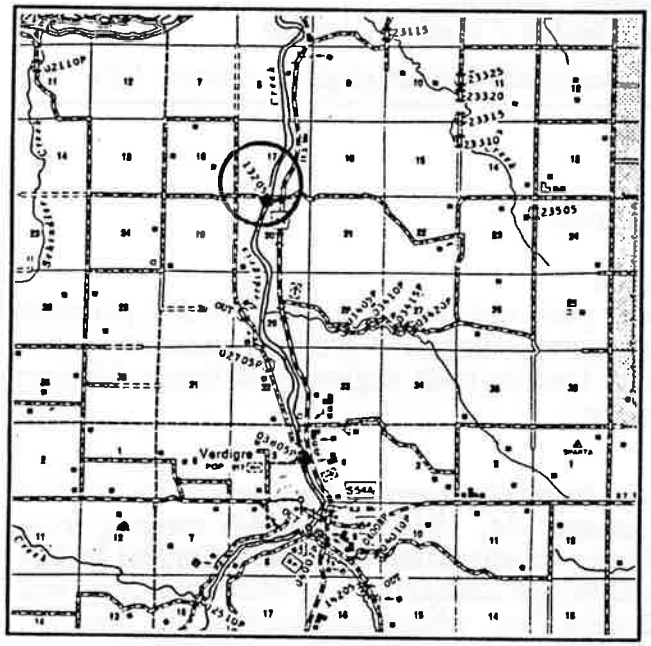
This bridge carries an unpaved county highway over Verdigris Creek a few miles downstream from the town of Verdigre. Bids for the construction of this structure were opened at the Knox County Courthouse in Center on January 24, 1918. With bids ranging from $15,376 to $14,585 for the superstructure, proposals were received from six companies: Elkhorn Construction Company, Central Bridge and Construction Company, Beaty Company, Omaha Structural Steel Bridge Company, Midland Bridge Company, and Western Bridge and Construction Company. The award was won by the lowest bidder, Western, a prominent Omaha firm, which had received the county's annual bridge building contract for at least five of the previous ten years. In addition to $14,585 for the 180-foot superstructure, the company offered concrete at $27 per cubic yard and reinforcing steel at ten cents a pound. The Department of Public Works' 1919-20 **Biennial Report** notes that total cost of the bridge was $24,596.58, of which the state paid $17,167.37. This funding was provided by the State Aid Bridge Fund, created by a 1911 law to subsidize the cost of building or renovating bridges over streams 175-feet wide or greater (later decreased to 100 feet). The county paid the remainder. Under this program, which ended in 1936, a total of 97 bridges were built, repaired or purchased. The Gross Bridge was built under projects SAB-782 and SAB-828.

During the formative years of the state aid bridge program, the Nebraska State Engineer designed several long-span through trusses. Among these were the Parshall State Aid Bridge, the Redbird State Aid Bridge, the Fremont State Aid Bridge, the Schuyler State Aid Bridge and the Gross State Aid Bridge. All but the Gross Bridge have since been removed (four spans of the Schuyler Bridge have been salvaged and moved to other locations). As a regionally important crossing and one of the few intact state aid structures remaining, the Gross State Aid Bridge is historically significant. It is technologically significant as one of the most noteworthy examples in Nebraska of this relatively uncommon vehicular truss type.

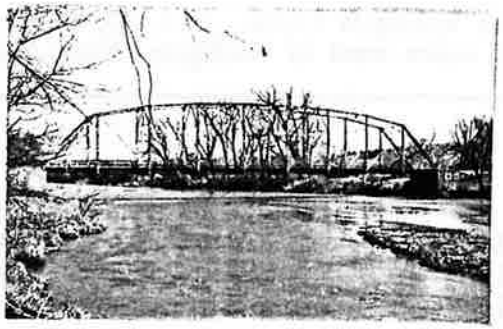
NAME(S) OF STRUCTURE

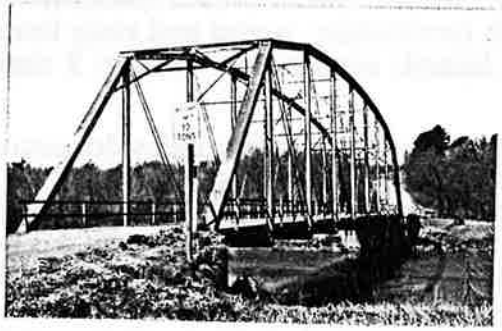
Gross State Aid Bridge [Verdigris Creek Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C005413205; Proceedings of the Knox County Supervisors, 1889-1918, Knox County Courthouse, Center, Nebraska; Nebraska Department of Roads, "Nebraska State Aid Bridges," September 1978; Nebraska State Board of Irrigation, Highways and Drainage, **Twelfth Biennial Report**, 1917-18, p. 354; Nebraska Department of Public Works, **Thirteenth Biennial Report**, 1919-20, p. 557; field inspection by Charlene K. Roise, 22 April 1990.

INVENTORIED BY

Charlene K. Roise

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Little Bazile Creek Bridge
NDOR: C005415305

KNOX15

DATE(S) OF CONSTRUCTION
ca.1925

LOCATION
township road over Little Bazile Creek; S20/29, T30N, R4W
3.7 miles east, 3.9 miles south of Center; Knox County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 27)

CONDITION
good

OWNER
Knox County

span number: 1
span length: 100.0'
total length: 135.0'
roadway wdt.: 19.6'

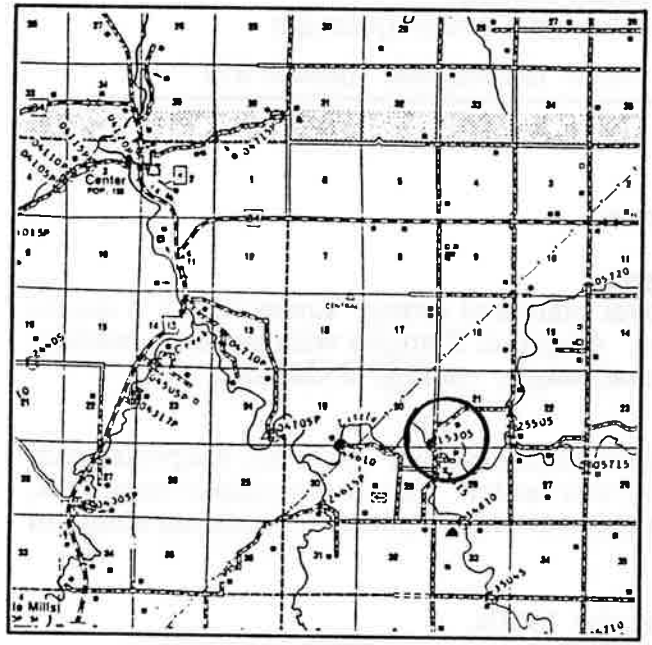
superstructure: steel, 5-panel, rigid-connected Pratt pony truss
substructure: timber back- and wingwalls
floor/decking: double-layer timber deck over I-beam stringers
other features: upper chord: back-to-back channels with cover plate and lacing; lower chord: 2 angles with battens; vertical: 4 angles with battens; diagonal: 2 angles with battens; bracing: outriders; floor beam: I-beam; bottom lateral: angle; railing: 2 channels

This bridge carries a north-south unpaved road over Little Bazile Creek. Plates on the bridge's northwest and southeast endposts read: "Capacity 20 Tons." Proceedings of the Knox County Supervisors do not refer specifically to this bridge. Given the rigid connections, 20-ton capacity, and 20-foot roadway, the bridge probably dates from the 1920s when these features were commonly found on standard state bridge plans.

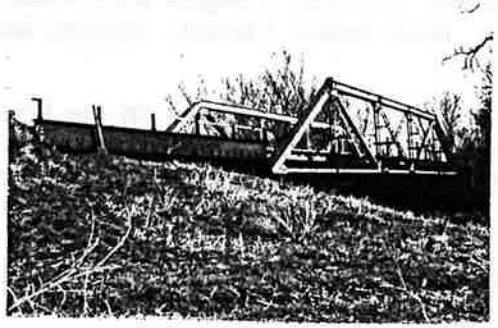
The Little Bazile Creek Bridge is typical of many Pratt pony trusses built in Nebraska during the 1920s.

NAME(S) OF STRUCTURE
Little Bazile Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C005415305; Proceedings of the Knox County Supervisors, 1889-1918, Knox County Courthouse, Center, Nebraska; field inspection by Charlene K. Roise, 22 April 1990.

INVENTORIED BY
Charlene K. Roise

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Verdigris Creek Bridge
NDOR: C005416205

KNOX16

DATE(S) OF CONSTRUCTION
ca.1925

LOCATION
township road over South Branch of Verdigris Creek; S32, T29N, R7W
6.2 miles west of State Highway 14; Knox County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 12)

CONDITION
good

OWNER
Knox County

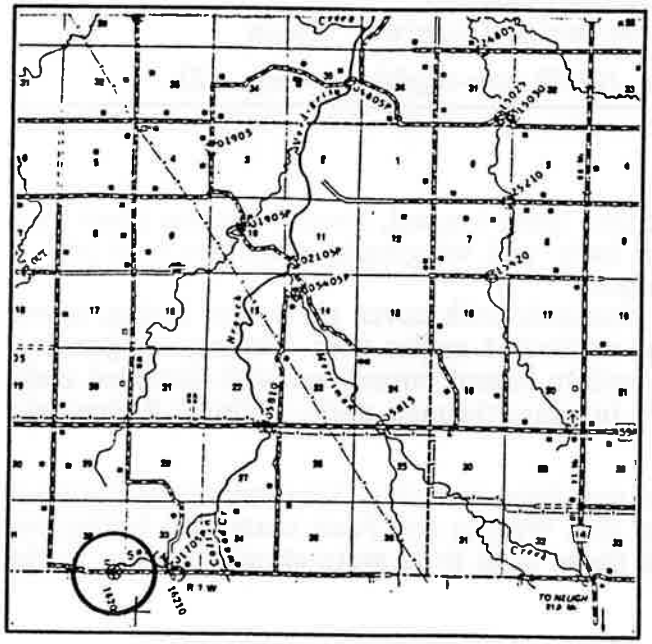
span number:	2	superstructure:	steel, 3-panel, rigid-connected Pratt pony truss; steel 4-panel, riveted Warren pony truss
span length:	65.0'	substructure:	steel pile abutments, with timber and steel back- and wingwalls; steel pile bent pier
total length:	118.0'	floor/decking:	double-layer timber deck over I-beam stringers
roadway wdt.:	16.0'	other features:	Both trusses - upper chord: back-to-back channels with cover plate and lacing; lower chord: back-to-back channels with battens; vertical: 4 angles with battens; diagonal: 2 angles with battens; floor beam: I-beam; bottom lateral: round rod with threaded ends. East span - railings: 2 angles. West span - bracing: through deck; railings: 2 channels.

This bridge carries an unpaved road that extends east-west along the line between Antelope and Knox counties. Proceedings of the Knox County Supervisors do not refer specifically to this bridge. Given the unlikely combination of a Warren and Pratt truss, this bridge has apparently been built by combining trusses from two bridges. Both trusses are typical of those built from state standard plans in the 1920s, when the state began to use Warren as well as Pratt designs.

There is no known historical significance to this crossing. The trusses are typical of those built in the state during the 1920s.

NAME(S) OF STRUCTURE
Verdigris Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C005416205; Proceedings of the Knox County Supervisors, 1889-1918, Knox County Courthouse, Center, Nebraska; field inspection by Charlene K. Roise, 22 April 1990.

INVENTORIED BY
Charlene K. Roise

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C005431825

KNOX17

DATE(S) OF CONSTRUCTION
ca.1935

LOCATION
county highway over stream; S12/13, T32N, R4W
1.5 miles north, 0.5 miles east of Lindy; Knox County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 17)

CONDITION
excellent

OWNER
Knox County

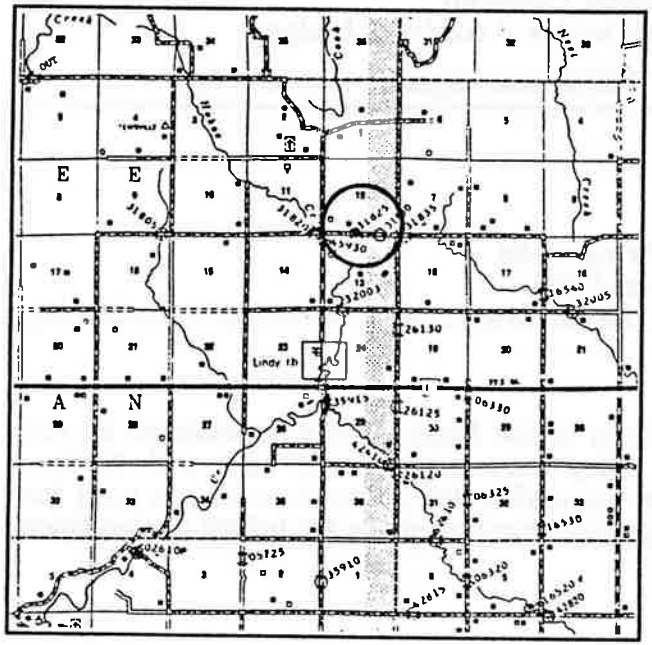
span number:	1	superstructure:	steel deck girder
span length:	40.0'	substructure:	steel pile abutments with timber back and wing walls
total length:	43.0'	floor/decking:	corrugated metal deck covered by concrete and dirt
roadway wdt.:	24.0'	other features:	2 deck girders edge smaller stringers beneath the roadway; 2 large I-beams provide bracing between the girders; Armco railing

This bridge carries an unpaved east-west road over a small stream north of Lindy. Proceedings of the Knox County Supervisors do not refer specifically to this bridge. Deck steel girder bridges became popular in the 1920s. They were not typically built with 24-foot roadways until the early 1930s, however. Since the onset of World War II made it almost impossible for counties to obtain steel for bridge construction, this bridge probably dates from the 1930s. Knox County had been using state standard plans for bridge design since 1912, so this bridge is presumably built from state plans.

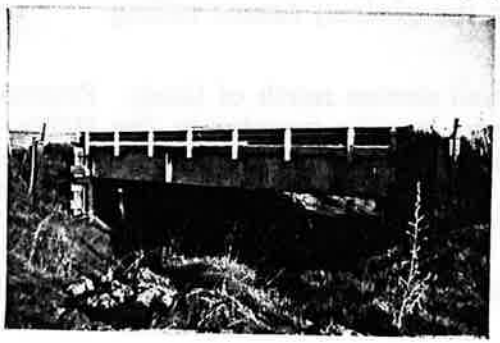
This bridge is typical of the small, deck steel girder bridges built in the 1930s.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C005431825; Proceedings of the Knox County Supervisors, 1889-1918, Knox County Courthouse, Center, Nebraska; standard plans, located at Bridge Division, Nebraska Department of Roads, Lincoln, Nebraska; field inspection by Charlene K. Roise, 20 April 1990.

INVENTORIED BY
Charlene K. Roise

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C005435915

KNOX18

DATE(S) OF CONSTRUCTION
1939

LOCATION
county highway over intermittent stream; S25, T32N, R4W
0.5 mile south of Lindy; Knox County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 24)

CONDITION
excellent

OWNER
Knox County

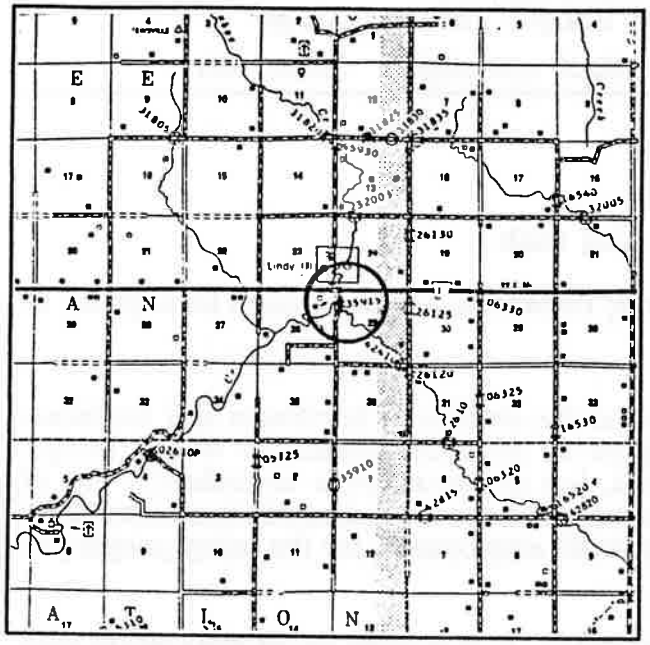
span number:	1	superstructure:	steel deck girder
span length:	79.0'	substructure:	steel pile abutments with timber back and wing walls
total length:	80.0'	floor/decking:	dirt over timber deck
roadway wdt.:	20.0'	other features:	7 I-beam stringers parallel the exterior girders; transverse I-beams stretch from girder to girder and are bolted in place

This bridge carries an unpaved north-south road over a small stream south of Lindy. Plates on the structure's northwest and southeast corners read: "Capacity 15 tons 788-2 1939." Proceedings of the Knox County Supervisors do not refer specifically to this bridge. Project "788-2" is not mentioned in highway department biennial reports from 1937 to 1942, but the structure is undoubtedly one of the many bridges built during the 1930s with the assistance of federal relief money. The federal government dedicated significant funds to road construction during this period, not only to improve the infrastructure, but also to provide employment for the many people put out of work by the Depression.

This bridge is one of the few steel through girder bridges included in the statewide bridge inventory. It is notable for its association with the federal relief programs of the 1930s.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C005435915; Nebraska Department of Roads and Irrigation, **Twenty-Second Biennial Report**, 1937-38, **Twenty-Third Biennial Report**, 1939-40, **Twenty-Fourth Biennial Report**, 1941-42; field inspection by Charlene K. Roise, 20 April 1990.

INVENTORIED BY
Charlene K. Roise

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Little Bazile Creek Bridge KNOX19
NDOR: C005444610

DATE(S) OF CONSTRUCTION
1914; ca.1920

LOCATION
township road over Little Bazile Creek; S19/30, T30N, R4W
3.7 miles south, 2.7 miles east of Center; Knox County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 20)

CONDITION
fair

OWNER
Knox County

span number: 2
span length: 60.0'
total length: 107.0'
roadway wdt.: 15.5'

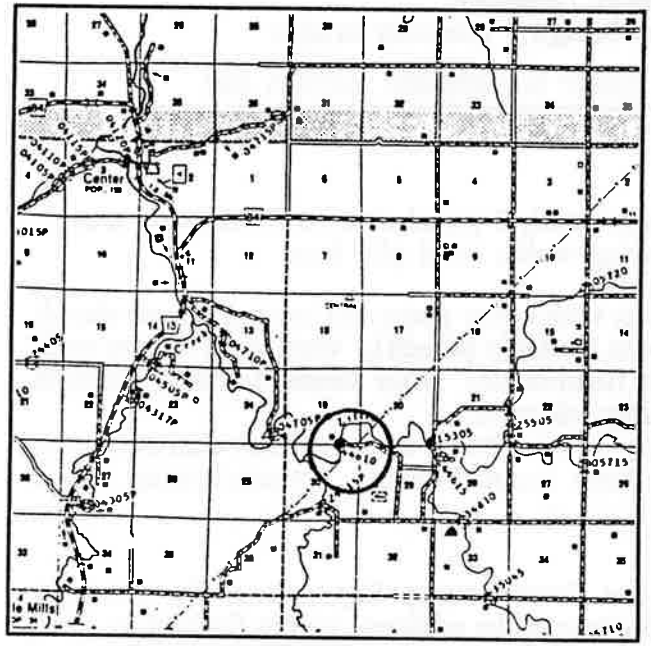
superstructure: steel, 3-panel pinned Pratt half-hip pony truss; steel, 3-panel riveted Pratt pony truss
substructure: steel pile abutments with timber back and wing walls; steel pile bent
floor/decking: double-layer timber deck over I-beam stringers
other features: east truss - upper chord: back-to-back channels with cover plate and lacing; lower chord: 2 eyebars (center panel), 2 angles with battens (outside panels); vertical: 4 angles with double lacing; counter: square eyerod with turnbuckle; floor beam: I-beam; bottom lateral: round rod with threaded ends; railing: channel.
west truss - upper chord: back-to-back channels with cover plate and lacing; lower chord: back-to-back channels with battens; vertical: 4 angles with battens; diagonal: 2 angles with battens; floor beam: I-beam; bottom lateral: round rod with threaded ends; railing: channel

This bridge carries an east-west unpaved road over Little Bazile Creek. Proceedings of the Knox County Supervisors do not refer specifically to this bridge. As indicated by a commemorative plate on the east truss, it was constructed in adjacent Pierce County in 1914 - a year in which the Canton Bridge Company of Canton OH held that county's annual bridge contract. The west truss is typical of bridges built from state plans during the late 1910s and the 1920s.

Evidently made up of two salvaged trusses from other bridges - at least one of which came from outside Knox County - this structure lacks any appreciable levels of significance or physical integrity.

NAME(S) OF STRUCTURE
Little Bazile Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C005444610; Proceedings of the Knox County Supervisors, 1889-1918, Knox County Courthouse, Center, Nebraska; field inspection by Charlene K. Roise, 22 April 1990.

INVENTORIED BY
Charlene K. Roise

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Howe Creek Bridge
NDOR: C005463020

KNOX20

DATE(S) OF CONSTRUCTION
ca.1920

LOCATION
county highway (Coll 28C) over Howe Creek; S12, T31N, R5W
1.2 miles east, 4.3 miles north of Center; Knox County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 25)

CONDITION
good

OWNER
Knox County

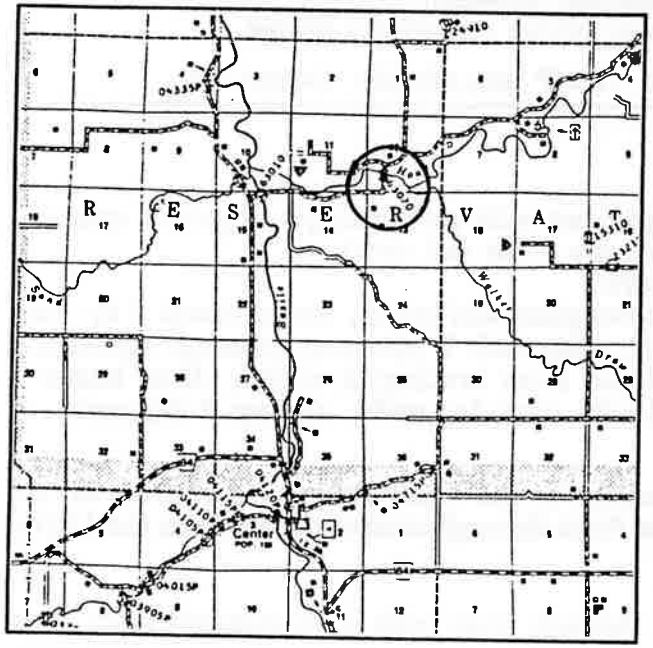
span number:	1	superstructure:	steel, 9-panel, pin-connected, Pratt through truss with steel stringer approach spans
span length:	160.0'	substructure:	concrete abutments and piers with timber wing walls (all new)
total length:	202.0'	floor/decking:	timber over I-beam stringers with wood curb
roadway wdt.:	16.4'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: 2 eyebars; vertical: back-to-back channels with lacing; diagonal: 2 eyebars; counter: round and square eye rods with turnbuckles; portal and sway bracing: 2 angles; floor beam: I-beam; top and bottom lateral: round rod with threaded ends; railing: 2 channels

This bridge carries an unpaved road in a north-south direction over Howe Creek. Proceedings of the Knox County Supervisors do not refer specifically to this bridge. It is similar, in any case, to standard state-designed plans for Pratt through trusses dating from the 1910s. Knox County adopted state standard plans for bridge construction in 1912.

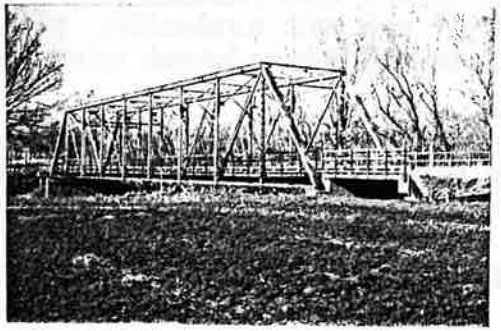
Except for its new substructure, this bridge is a well-preserved example of a typical Pratt through truss built from standard state plans from the 1910s and early 1920s.

NAME(S) OF STRUCTURE
Howe Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C005463020; Proceedings of the Knox County Supervisors, 1889-1918, Knox County Courthouse, Center, Nebraska; field inspection by Charlene K. Roise, 20 April 1990.

INVENTORIED BY
Charlene K. Roise

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Olive Branch Bridge
NDOR: C005501105

LANC01

DATE(S) OF CONSTRUCTION
ca.1930; moved 1980

LOCATION
Southwest 72nd Street over Olive Branch; S11/12, T7N, R5E
3.0 miles east of Kramer; Lancaster County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 17)

CONDITION
good

OWNER
Lancaster County

span number: 1
span length: 100.0'
total length: 102.0'
roadway wdt.: 24.0'

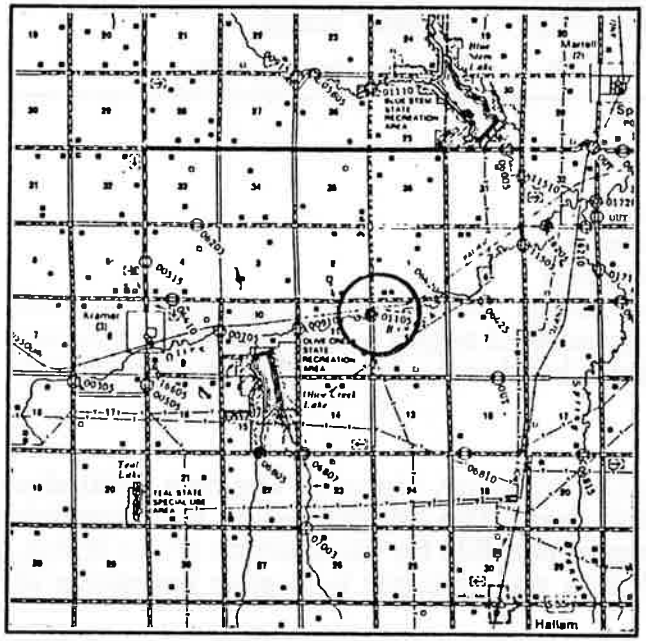
superstructure: steel, 8-panel, rigid-connected Pratt pony truss
substructure: I-beam piles with timber back- and wingwalls
floor/decking: concrete on corrugated steel over I-beam stringers
other features: upper chord: 2 channels with cover plate and lacing; lower chord: 2 angles with batten plates; vertical: 2 pair angles with lacing; diagonal: 2 angles with battens; floor beam: plate girder; lateral bracing: angles; guardrail: box beam; bridge plaque: "Capacity 20 tons, 1980"

According Lancaster County bridge records, this bridge was built in 1980 by the Capital Bridge Company, Lincoln. The date 1980 also appears on a bridge plaque. However, the structure probably was moved to this site in that year. The bridge's design and materials suggest that it may date from about 1930. The Capital Bridge Company may have, in fact, been responsible for construction of the bridge, since this firm was active in the county early in the twentieth century. In any event, the bridge was certainly built after imposition of state standard plans in 1913, and the design was thus the product of state plans.

The Pratt pony was the most popular truss design in the state in the first decades of the twentieth century, and many survive throughout the state. The Olive Branch Bridge is a typically configured example of this common structural type, but a lack of documentation about this bridge diminishes its significance.

NAME(S) OF STRUCTURE
Olive Branch Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C005501105; Lancaster County Bridge Record, located at the Lancaster County Courthouse, Lincoln, Nebraska; field inspection by Fred Quivik, 27 February 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Salt Creek Bridge
NDOR: C005501910

LANC02

DATE(S) OF CONSTRUCTION
1926

LOCATION
SW 14th Street over Salt Creek; S33/34, T8N, R6E
0.2 mile south of Sprague; Lancaster County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 30)

CONDITION
good

OWNER
Lancaster County

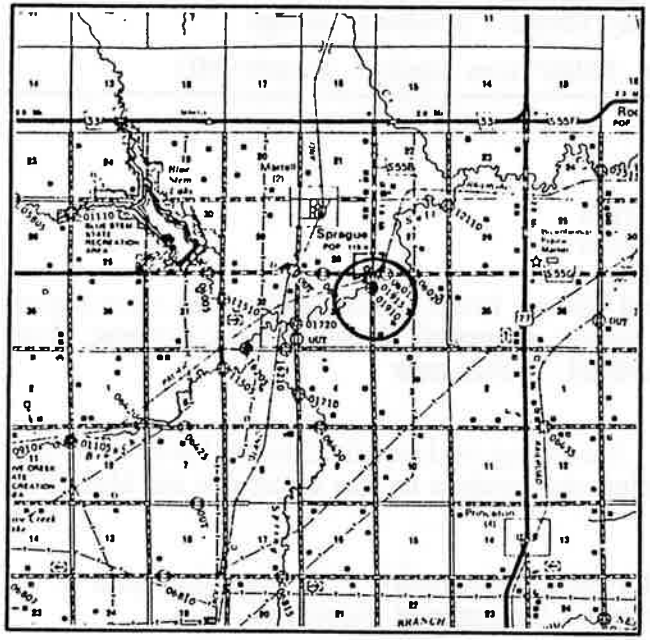
span number:	1	superstructure:	steel, 5-panel, rigid-connected Pratt pony truss
span length:	100.0'	substructure:	H-beam piles with timber back- and wingwalls
total length:	101.0'	floor/decking:	corrugated steel with gravel over I-beam stringers
roadway wdt.:	19.5'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 channels with batten plates; vertical: 2 pair angles with batten plates; diagonal: 2 angles with battens; floor beam: I-beam; lateral bracing: rods; guardrail: 2 channels

This Pratt pony truss carries an unpaved north-south road over Salt Creek near Sprague. According to Lincoln County bridge records, this structure was built in 1926 by the Economical Bridge Association. The county awarded the project to the company on March 23 of that year, when Economical submitted the low bid of $3560.65.

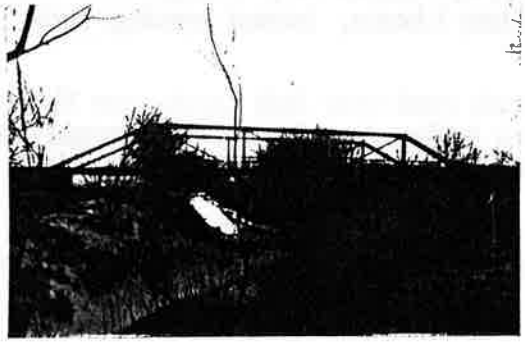
This is a typical pony truss, designed from state standard plans and dating from the mid-1920s. Measuring 100 feet, the span is the longest for which pony trusses were typically designed. A number of similar structures survive throughout Nebraska.

NAME(S) OF STRUCTURE
Salt Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C005501910; Lancaster County Commissioners' Record, 23 March 1926, and Lancaster County Bridge Record, located at the Lancaster County Courthouse, Lincoln, Nebraska; field inspection by Fred Quivik, 28 February 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Big Nemaha River Bridge LANC03
NDOR: C005502305

DATE(S) OF CONSTRUCTION
1919

LOCATION
South 12th Street over Middle Branch, Big Nemaha River; S23/24, T7N, R6E
1.0 mile south of Princeton; Lancaster County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 31)

CONDITION
good

OWNER
Lancaster County

span number:	1	superstructure:	concrete slab
span length:	20.0'	substructure:	concrete abutments with wingwalls
total length:	24.0'	floor/decking:	concrete with gravel wearing surface
roadway wdt.:	30.0'	other features:	guardrail: concrete with recessed panels, center pedestal, and flared end pedestals

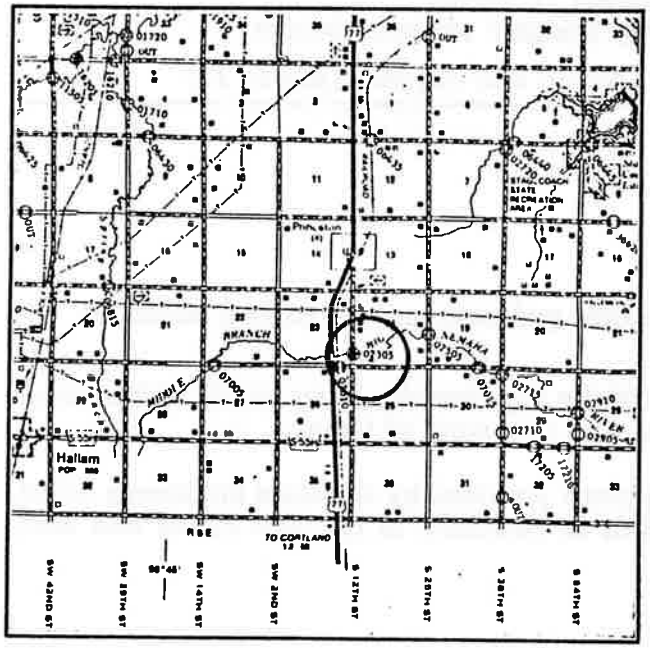
This small concrete structure carries an unpaved north-south road over the Middle Branch of the Big Nemaha River south of Princeton. According to Lancaster County bridge records, it was built in 1919 by the Pioneer Construction Company of Omaha.

The solid railings of this small bridge are typical of those included in the 1910s in standard plans provided by the state engineer's office. In detail and design, the Big Nemaha River Bridge typifies small-scale concrete construction in Nebraska in the late 1910s and early 1920s.

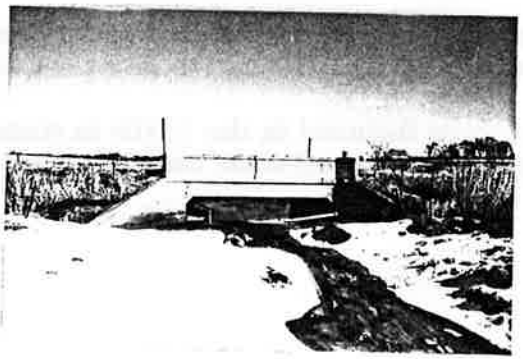
NAME(S) OF STRUCTURE

Big Nemaha River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C005502305; Lancaster County Bridge Record, located at the Lancaster County Courthouse, Lincoln, Nebraska; field inspection by Fred Quivik, 28 February 1989.

INVENTORIED BY

Lon Johnson, Renewable Technologies, Inc.

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C005504735

LANC04

DATE(S) OF CONSTRUCTION
1940-41

LOCATION
North 176th Street over unnamed stream; S13/14, T10N, R8E
2.7 miles east of Prairie Home; Lancaster County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 23)

CONDITION
good

OWNER
Lancaster County

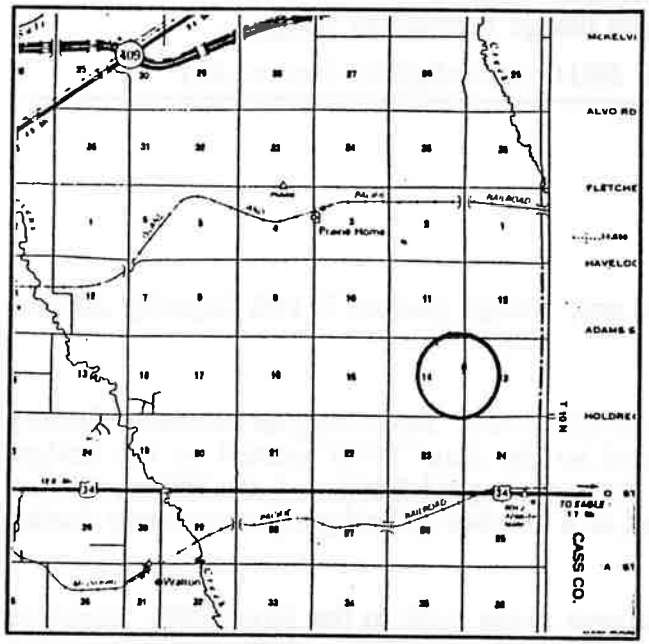
span number:	1	superstructure:	steel stringer
span length:	23.0'	substructure:	random ashlar back- and wingwalls
total length:	24.0'	floor/decking:	concrete
roadway wdt.:	22.0'	other features:	guardrail: concrete pedestals with concrete rail; bridge plaque: **U 198 Capacity 20 tons 1940** (impressed in concrete)

This steel stringer bridge carries 176th Street, an unpaved road running north south, over a small stream. According to Lancaster County bridge records, the 23-foot span replaced a timber pile bridge in 1940-41. This is confirmed by the date "1940" posted on the bridge. It was built by the county with the assistance of federal relief funds. Of the $3,950 cost, the county paid $605 and the WPA provided the remaining $3,345. Foreman on the project was Harlie Skaggs, who oversaw construction of a number of bridges in the county during this period. The bridge is virtually identical to C005506805, built at the same time.

The concrete railings and steel superstructure of this bridge are typical of the utilitarian stringer spans built in the late 1930s. Random ashlar facing of the back and wing walls, however, distinguishes the bridge as the work of a federal relief project, which provided employment for those out of work as a result of the Depression. While federal relief work was decreasing at this time, with the recovery of the nation's economy, public works programs continued to distribute valuable subsidies to improve roads and bridges. This modest structure represents this national trend.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C005504735; Lancaster County Bridge Record, located at the Lancaster County Courthouse, Lincoln, Nebraska; field inspection by Mary McCormick, 28 February 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C005506805

LANC05

DATE(S) OF CONSTRUCTION
1940

LOCATION
West Princeton Road over unnamed stream; S15/22, T7N, R5E
south edge of Olive Creek Lake; Lancaster County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 23)

CONDITION
good

OWNER
Lancaster County

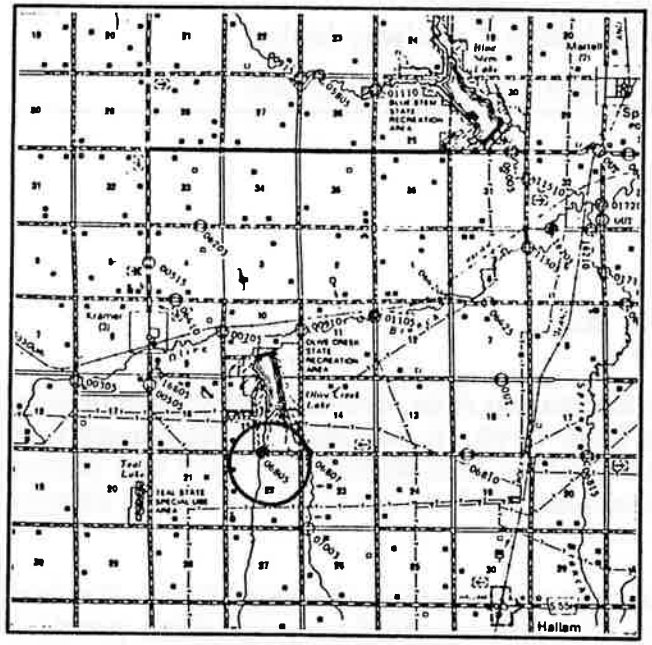
span number:	1	superstructure:	steel stringer
span length:	23.0'	substructure:	random ashlar back- and wingwalls
total length:	25.0'	floor/decking:	concrete
roadway wdt.:	22.0'	other features:	guardrail: concrete pedestals with concrete rail

This bridge carries West Princeton Road, which edges the south border of Olive Creek State Recreation Area, over a small stream flowing to Olive Creek Lake. According to Lancaster County bridge records, the 23-foot span dates from 1940. It was built by the county with the assistance of federal relief funds, and cost $3,566. For a virtually identical bridge (C005504735) built at the same time and costing $3,950, the county paid about fifteen percent of the total and the WPA funded the rest. Foreman for both projects was Harlie Skaggs, who oversaw construction of a number of bridges in the county during this period.

The concrete railings and steel superstructure of this bridge are typical of the utilitarian stringer spans built in the late 1930s. Random ashlar facing of the back and wing walls, however, distinguishes the bridge as the work of a federal relief project, which provided employment for those out of work as a result of the Depression. While federal relief work was decreasing at this time, with the recovery of the nation's economy, public works programs continued to distribute valuable subsidies to improve roads and bridges. This modest structure represents this national trend.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C005506805; Lancaster County Bridge Record, located at the Lancaster County Courthouse, Lincoln, Nebraska; field inspection by Fred Quivik, 28 February 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Rock Creek Bridge
NDOR: C005513125

LANC06

DATE(S) OF CONSTRUCTION
ca.1920; moved 1946

LOCATION
North 70th Street over Rock Creek; S3/4, T12N, R7E
3.5 miles northeast of Davey; Lancaster County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 9)

CONDITION
fair

OWNER
Lancaster County

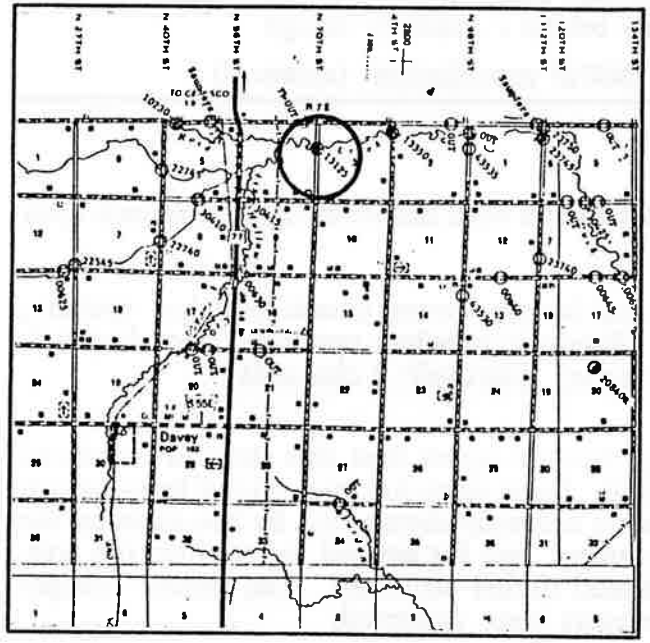
span number:	1	superstructure:	steel, 5-panel, pin- / rigid-connected Pratt pony truss with timber stringer approach span
span length:	90.0'	substructure:	I-beam pile bent abutments and pier
total length:	113.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	15.8'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: punched eyebars; vertical: 2 pair angles with batten plates; diagonal: punched eyebars; floor beam: I-beams; strut: steel plates; lateral bracing: rods; guardrail: 2 channels

This Pratt pony truss carries a north-south road over Rock Creek. Lancaster County bridge records report that this structure replaced a timber pile bridge at this site in 1946. However, the bridge was more likely built about 1920. State plans for this style of truss, which combines pinned and riveted connections, may have been available as early as 1913, and were certainly distributed by the state by the mid-1920s. Shortages of materials caused by World War II hampered bridge construction during, and for several years after, the war. This bridge was probably recycled from another location at that time to replace a deteriorated timber structure. The timber stringer approach span also reflects the need to make do with what was available, since I-beam stringers were preferred.

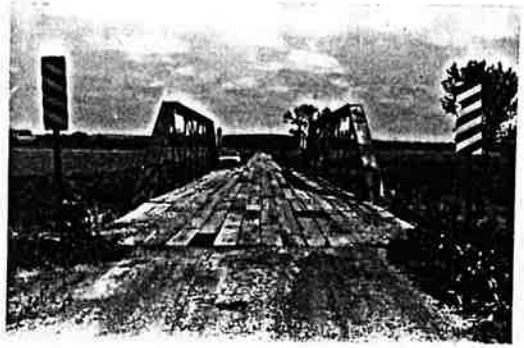
This is a typical pony truss, probably designed from state standard plans and dating from the 1920s. Alterations to the verticals and lack of documentation about the bridge's construction diminish its significance.

NAME(S) OF STRUCTURE
Rock Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C005513125; Lancaster County Bridge Record, located at the Lancaster County Courthouse, Lincoln, Nebraska; field inspection by Mary McCormick, 1 March 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Rock Creek Bridge
NDOR: C005513350

LANC07

DATE(S) OF CONSTRUCTION
1978 (erected or moved)

LOCATION
North 84th Street over Rock Creek; S2/3, T12N, R7E
5.2 miles northeast of Davey; Lancaster County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 32)

CONDITION
excellent

OWNER
Lancaster County

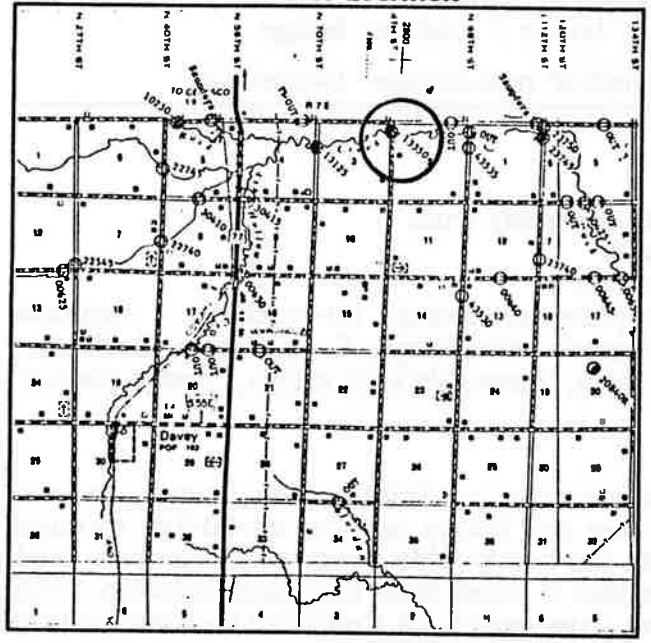
span number:	1	superstructure:	steel, 4-panel, rigid-connected polygonal Warren pony truss
span length:	80.0'	substructure:	I-beam piles with timber back- and wingwalls
total length:	84.0'	floor/decking:	concrete on vaulted forms over I-beam stringers
roadway wdt.:	25.0'	other features:	upper chord: 2 channel sections with cover plate and lacing; lower chord: 2 channels with batten plates; vertical: wide flange; diagonal: wide flange; floor beam: wide flange; lateral bracing: 2 angles; guardrail: hollow steel; moveable end: rocker; bridge plaque: 1978

This Warren pony truss carries a north-south road over Rock Creek near the border of Saunders County. Tubular piers from a previous structure are visible beneath the bridge's north end. Lancaster County bridge records state that this bridge replaced an 80-foot through truss in 1978. A bridge plaque reading "Capacity 20 tons, 1978" confirms this date. Given the heavy wide flange web members used in the truss's construction, the bridge may have been built in that year. It is also possible that it dates from sometime between 1945 and the early 1970s, and was moved to this site in 1978. It is very similar to another 80-foot truss over Rock Creek in Lancaster County (LANC15), which is also said to date from 1978-79.

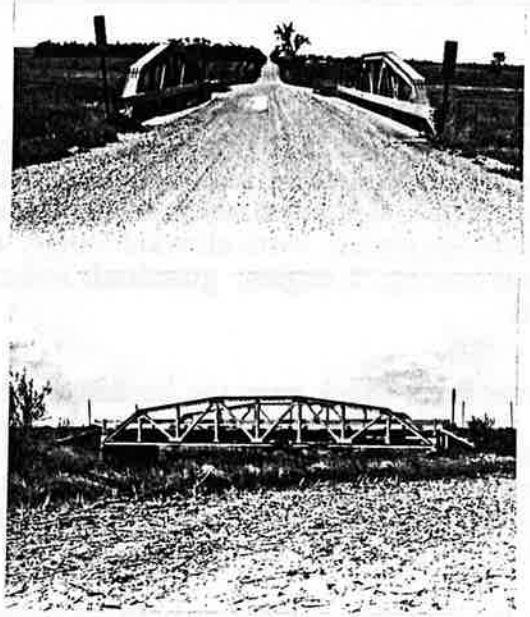
This bridge is of recent construction. Since neither the crossing nor the structure's technology appear to be noteworthy, the bridge is not significant.

NAME(S) OF STRUCTURE
Rock Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C005513350; Lancaster County Bridge Record, located at the Lancaster County Courthouse, Lincoln, Nebraska; field inspection by Fred Quivik, 28 February 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C005513605

LANC08

DATE(S) OF CONSTRUCTION
1941

LOCATION
A Street over Stevens Creek; S29/32, T10N, R8E
0.2 mile east of Walton; Lancaster County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 21)

CONDITION
good

OWNER
Lancaster County

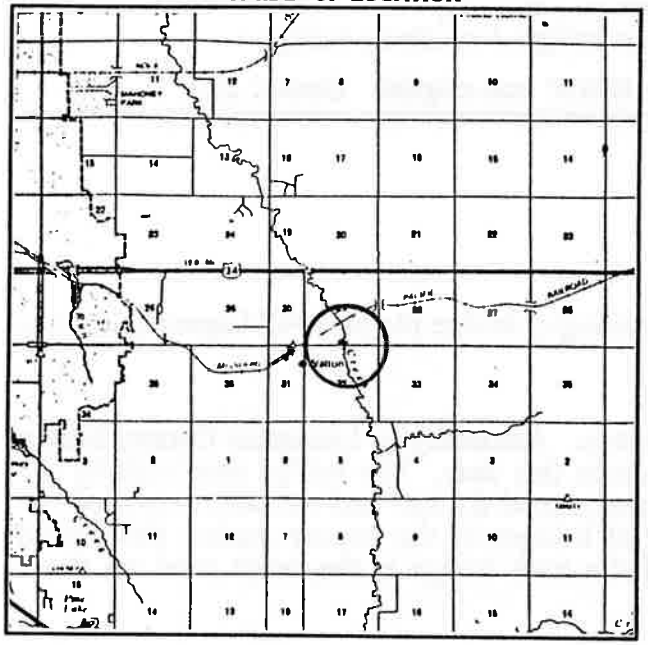
span number:	1	superstructure:	concrete filled spandrel arch
span length:	30.0'	substructure:	concrete abutments and wingwalls
total length:	32.0'	floor/decking:	gravel over earth fill
roadway wdt.:	24.6'	other features:	guardrail: concrete pedestals with concrete railings; bridge plaque: **J47 Capacity 20 tons 1941** (impressed in concrete)

This filled spandrel concrete arch bridge carries A Street over Stevens Creek just east of Walton. According to Lancaster County bridge records, the 23-foot span dates from 1941. A plaque reading "Capacity 20 tons, 1941" confirms this date. The bridge was built by the county with the assistance of federal relief funds, and cost $3,230. Of that amount, the county paid $1,137 and the WPA covered the rest. Foreman for the project was Harlie Skaggs, who oversaw construction of a number of bridges in the county during this period including **LANC04** and **LANC05**, both steel stringer spans. The concrete railing design of the arch bridge is the same used on those stringer spans.

Although a number of small concrete arch bridges were built in Nebraska in the 1910s, their construction was labor intensive, causing the style to lose popularity in the 1920s when cost dictate design choice. With the initiation of federal relief work programs in the 1930s, however, the concrete arch occasionally reappeared. These federal programs were intended not only to improve the nation's infrastructure but, just as importantly, to provide employment for those out of work as a result of the Depression. While federal relief work was decreasing by the late 1930s, public works programs continued to distribute valuable subsidies to improve roads and bridges. Built in 1941, this small-scale concrete arch represents this national trend.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Nunber C005513605; Lancaster County Bridge Record, located at the Lancaster County Courthouse, Lincoln, Nebraska; field inspection by Mary McCormick, 28 February 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C005513920

LANC09

DATE(S) OF CONSTRUCTION
1920

LOCATION
South 120th Street over unnamed stream; S31/32, T10N, R8E
south edge of Walton; Lancaster County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 27)

CONDITION
good

OWNER
Lancaster County

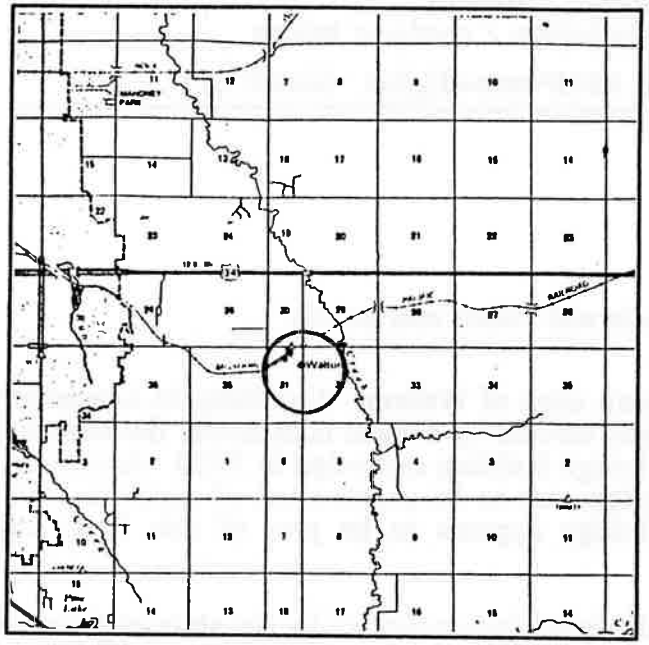
span number:	1	superstructure:	concrete slab
span length:	20.0'	substructure:	concrete
total length:	22.0'	floor/decking:	concrete
roadway wdt.:	23.8'	other features:	guardrail: concrete rails with recessed panels and flared end panels

This short-span, concrete bridge carries South 120th Street over a small stream on the south edge of Walton. According to Lancaster County bridge records, it was built replaced a timber pile bridge at this site in 1920. It was erected by a local contractor, the Martin-Day Company, for a cost of $4,995. Lancaster County embarked on an ambitious road and bridge building campaign in 1920. According to an article in the **Monthly Report** of the Nebraska Department of Public Works, "all bridges are to be constructed of concrete with twenty-four foot roadways." Although not specifically mentioned in the report, this bridge appears to be part of this flurry of improvements.

A well-preserved and well-documented example of a popular concrete slab bridge design built from plans provided by the state engineer's office, this structure typifies early small-scale concrete construction in Nebraska.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C005513920; Nebraska Department of Public Works, **Monthly Report**, October 1919, p. 25; Lancaster County Bridge Record, located at the Lancaster County Courthouse, Lincoln, Nebraska; field inspection by Mary McCormick, 28 February 1989.

INVENTORIED BY	**AFFILIATION**	**DATE**
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Beal Slough Bridge
NDOR: C005514020

LANC10

DATE(S) OF CONSTRUCTION
1937

LOCATION
West Pioneers Boulevard over Beal Slough; S2/11, T9N, R6E
0.5 mile west of Lincoln; Lancaster County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 46)

CONDITION
good

OWNER
Lancaster County

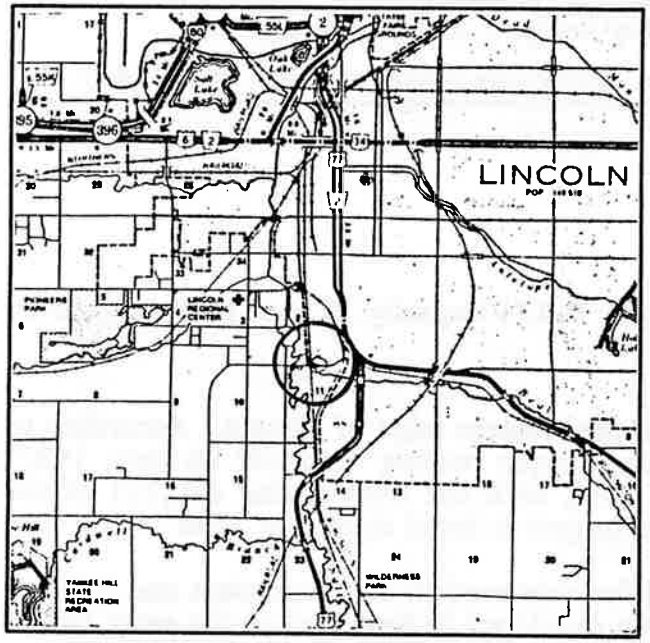
span number:	1	superstructure:	concrete rigid frame
span length:	40.0'	substructure:	concrete with wingwalls
total length:	42.0'	floor/decking:	concrete
roadway wdt.:	24.0'	other features:	guardrail: concrete balustrade; bridge plaque: **O-174 Capacity 20 tons 1937** (impressed in concrete)

This concrete rigid-frame bridge carries West Pioneers Boulevard over the Beal Slough on the western edge of Lincoln. According to Lancaster County bridge records, the bridge replaced an old pony truss in 1937. A bridge plaque reading "Capacity 20 tons, 1937" confirms this date. The bridge was a collaborative project between the county and the WPA, with the WPA paying $10,771 of the structure's $16,942 total cost and the county funding the remainder. The foreman for the project is listed simply as "Ross".

Public works programs of the 1930s allowed federal funding, for the first time, to be used for construction of urban roads and bridges. As a result, aesthetic concerns came to the forefront. The rigid frame design, which had been developed in New York in the early 1920s, gained popularity as both a picturesque and practical alternative. Use of rigid frame construction, as well as the bridge's wide roadway and ornamental concrete balustrade, are evidence that the Beal Slough Bridge was considered an important entryway to the City of Lincoln.

NAME(S) OF STRUCTURE
Beal Slough Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C005514020; Lancaster County Bridge Record, located at the Lancaster County Courthouse, Lincoln, Nebraska; field inspection by Fred Quivik, 28 February 1989.

INVENTORIED BY	AFFILIATION	DATE
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Olive Branch Bridge
NDOR: C005516205

LANC11

DATE(S) OF CONSTRUCTION
1897

LOCATION
West Stagecoach Road over Olive Branch; S5/32, T7/8N, R6E
1.7 miles southwest of Sprague; Lancaster County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / closed

RATING potentially NRHP eligible (score: 53)

CONDITION
fair

OWNER
Lancaster County

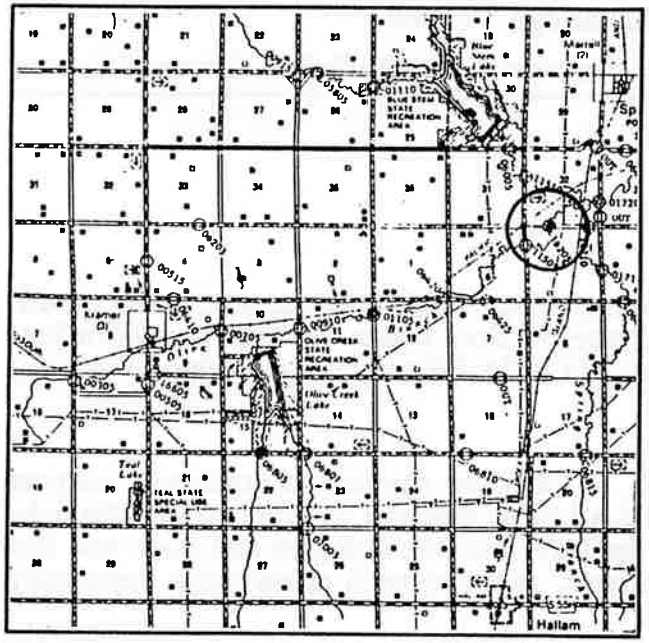
span number:	1	superstructure:	steel, 3-panel, pin- / rigid-connected Warren truss leg
span length:	40.0'	substructure:	bedstead legs; timber pile abutments
total length:	74.0'	floor/decking:	timber deck (removed)
roadway wdt.:	16.2'	other features:	end post: 2 channels with cover plate and lacing; upper chord: 2 Z channels; lower chord: 2 angles; vertical: 2 pair angles; diagonal: 2 angles; floor beam: I-beam; lateral bracing: rods; guardrail: laced angles; bridge plaque: **W.I.B.Co.** (Wrought Iron Bridge Company) **1897**

This small truss leg bedstead once carried an east-west section line road over a small creek. A cast iron cap on the northwest endpost reads "W.I.B.Co. 1897." According to Lancaster County Board minutes, the county awarded a bridge erection contract to the Wrought Iron Bridge Company of Canton, Ohio, on February 25, 1897. Later county bridge records indicate that the stringers and floor was last replaced in 1961, and that the bridge was taken out of service in 1987. The deck, stringers, and approach spans were apparently removed at this time.

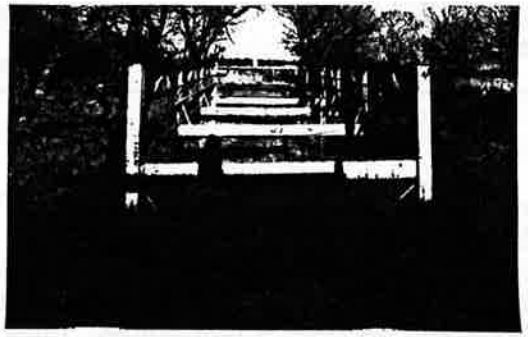
Despite removal of deck, stringers, and approach spans, the basic structure of this bridge appears to be well preserved (and in fact its bedstead configuration is visually enhanced without these non-structural elements). Its fabricator, the Wrought Iron Bridge Company, was one of the two largest vehicular bridge erectors in the country during the late 1900s, rivaling the giant King Iron Bridge Company in its nationwide trade. Though not as active in Nebraska as King, WIBCo did erect spans in such southeastern Nebraska counties as Gage, Richardson, Otoe, Nemaha and Johnson, and as far afield as Cherry County (see **CHER02**) by the time it was consolidated into the American Bridge Company in 1900. In 1885, WIBCo advertised that it had built some 500 lineal feet of bridges in Nebraska (compared with, for instance, Iowa, which had almost 22,000 feet). Few WIBCo spans are known to have survived in the state, however. The Ohio-based fabricator maintained an extensive catalog of steel and iron spans, ranging from the standard to the esoteric. With its Warren bedstead configuration, this small-scale structure in Lancaster County represents the former more than the latter. The bedstead truss design enjoyed brief popularity in Nebraska in the late 1890s and early 1900s. A single "leg" functioned both as endpost and as substructural support. Described in a 1902 article entitled "Defective Bridge Construction in the Prairie States," bedsteads typically measured 30 to 60 feet and featured pony trusses in which "the end post of the truss is extended downwards to form the leg support... and is securely riveted to the end of the upper chord member." Designed without provision for expansion and contraction, bedstead structures quickly weakened, making them prone to buckle under the simple pressure of earth fill. Others collapsed because of corrosion.

NAME(S) OF STRUCTURE
Olive Branch Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C005516205; Wrought Iron Bridge Company, "Illustrated Pamphlet," 1885 catalog of bridges, original located at Ohio State Historical Society, Columbus, Ohio; Lancaster County Board Minutes, 25 February 1897, and Bridge Records, located at the Lancaster County Courthouse, Lincoln, Nebraska; Daniel B. Luten, "Defective Bridge Construction in the Prairie States," **Engineering News** 47 (17 April 1902): 304-5; field inspection by Fred Quivik, 28 February 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Middle Creek Bridge
NDOR: C005520720

LANC12

DATE(S) OF CONSTRUCTION
ca.1925; moved 1949

LOCATION
Northwest 98th Street over Middle Creek; S21/22, T10N, R5E
0.2 mile north of Emerald; Lancaster County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 10)

CONDITION
good

OWNER
Lancaster County

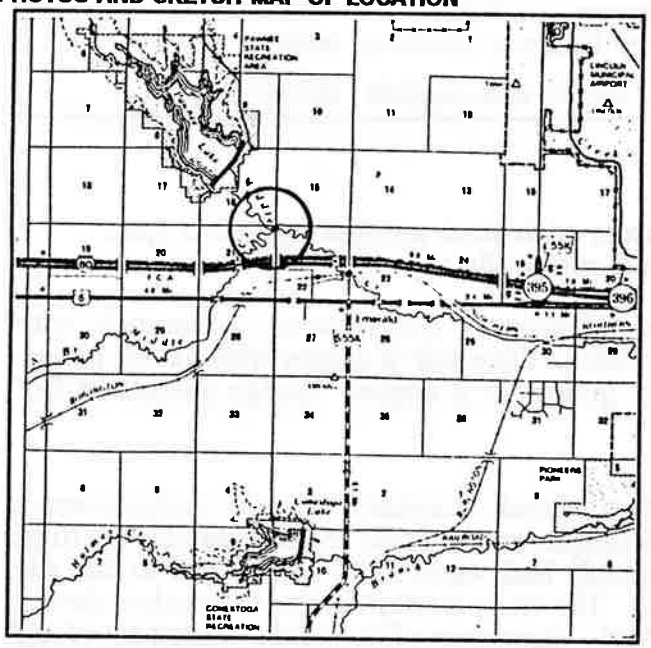
span number:	1	superstructure:	steel, 5-panel, rigid-connected Pratt pony truss with steel stringer approach span
span length:	100.0'	substructure:	I-beam bent and piles with timber back- and wingwalls
total length:	129.0'	floor/decking:	concrete deck over I-beam stringers
roadway wdt.:	18.9'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 channels with battens; vertical: 2 pair angles with batten plates; diagonal: 2 angles with batten plates; floor beam: I-beams; lateral bracing: rods; guardrail: 2 angles; bridge plaque: **M-127 Capacity 15 tons 1947**

This Pratt truss bridge carries Northwest 98th Street, an unpaved north-south road, over Middle Creek. Lancaster County bridge records say that the bridge was built in 1949 by L.E. McBride, a Lincoln contractor, for $15,000. A plaque on the truss reads "Capacity 15 tons, 1947," suggesting a construction date two years earlier. In fact, however, the truss was probably built circa 1925 and moved to this site in 1949. This would help account for the disparity between the bridge record and the plaque. The truss is very similar to another riveted Pratt pony in Lancaster County (**LANC02**), which has a documented construction date of 1926. Shortages of materials caused by World War II hampered bridge construction during, and for several years after, the war. This bridge was probably recycled from another location at that time.

This is a typical pony truss, probably designed from state standard plans and dating from the mid-1920s. Conflicting information about the bridge's construction diminish its significance.

NAME(S) OF STRUCTURE
Middle Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C005520720; Lancaster County Bridge Record, located at the Lancaster County Courthouse, Lincoln, Nebraska; field inspection by Fred Quivik, 28 February 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Millville Creek Bridge
NDOR: C005520840R

LANC13

DATE(S) OF CONSTRUCTION
ca. 1900; possibly moved 1966

LOCATION
field access road over Millville Creek; Center N1/2 S20, T12N, R8E
6.0 miles east of Davey; Lancaster County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 35)

CONDITION
good

OWNER
Lancaster County

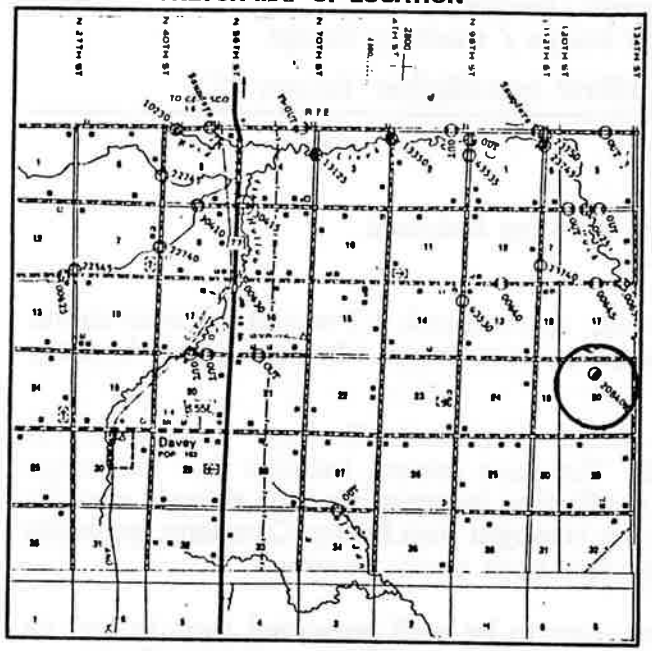
span number:	1	superstructure:	steel, 3-panel, pin- / rigid-connected Warren truss leg bedstead
span length:	35.0'	substructure:	timber pile abutments with timber backwalls
total length:	37.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	15.7'	other features:	end post: 2 channels with cover plate and lacing; upper chord: 2 Z sections; lower chord: 2 angles; vertical: 4 angles; diagonal: 2 angles; floor beam: I-beam; lateral bracing: rods; guardrail: lattice

This Warren bedstead truss carries a farm access road over Millville Creek in the northwest corner of Lancaster County. County records state that this bridge replaced a timber pile bridge that had been erected at this site in 1953. The same records indicate that the bridge spans Rock Creek, even though Rock Creek does not pass through section 20. Despite this conflicting information, one thing is certain: given its similarity to another, documented Lancaster County span (**LANC11**), it was built by the Wrought Iron Bridge Company, probably in 1897. It is conceivable that the bridge was moved in 1966, and that this has caused the confusion about its origin.

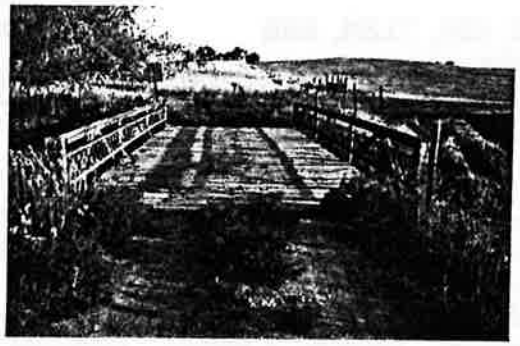
Despite removal of deck, stringers, and approach spans, the basic structure of this bridge appears to be well preserved (and in fact its bedstead configuration is visually enhanced without these non-structural elements). Its fabricator, the Wrought Iron Bridge Company, was one of the two largest vehicular bridge erectors in the country during the late 1900s, rivaling the giant King Iron Bridge Company in its nationwide trade. Though not as active in Nebraska as King, WIBCo did erect spans in such southeastern Nebraska counties as Gage, Richardson, Otoe, Nemaha and Johnson, and as far afield as Cherry County (see **CHER02**) by the time it was consolidated into the American Bridge Company in 1900. In 1885, WIBCo advertised that it had built some 500 lineal feet of bridges in Nebraska (compared with, for instance, Iowa, which had almost 22,000 feet). Few WIBCo spans are known to have survived in the state, however. The Ohio-based fabricator maintained an extensive catalog of steel and iron spans, ranging from the standard to the esoteric. With its Warren bedstead configuration, this small-scale structure in Lancaster County represents the former more than the latter. The bedstead truss design enjoyed brief popularity in Nebraska in the late 1890s and early 1900s. A single "leg" functioned both as endpost and as substructural support. Described in a 1902 article entitled "Defective Bridge Construction in the Prairie States," bedsteads typically measured 30 to 60 feet and featured pony trusses in which "the end post of the truss is extended downwards to form the leg support... and is securely riveted to the end of the upper chord member." Designed without provision for expansion and contraction, bedstead structures quickly weakened, making them prone to buckle under the simple pressure of earth fill. Others collapsed because of corrosion. It is surprising that about a dozen of these once common structures - half of which are configured as Warrens - still survive in Nebraska, including this bridge and another (**LANC11**) in Lancaster County.

NAME(S) OF STRUCTURE
Millville Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C005520840R; Lancaster County Bridge Record, located at the Lancaster County Courthouse, Lincoln, Nebraska; Daniel B. Luten, "Defective Bridge Construction in the Prairie States," Engineering News 47 (17 April 1902): 304-5; field inspection by Mary McCormick, 28 February 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C005520923

LANC14

DATE(S) OF CONSTRUCTION
1921; 1973

LOCATION
Burlington Northern Railroad over County highway and Middle Creek; S22/23, T10N, R5E
0.5 mile north of Emerald; Lancaster County, Nebraska

USE (ORIGINAL / CURRENT)
railroad overpass / railroad overpass

RATING NRHP non-eligible (score: 27)

CONDITION
good

OWNER
Lancaster County

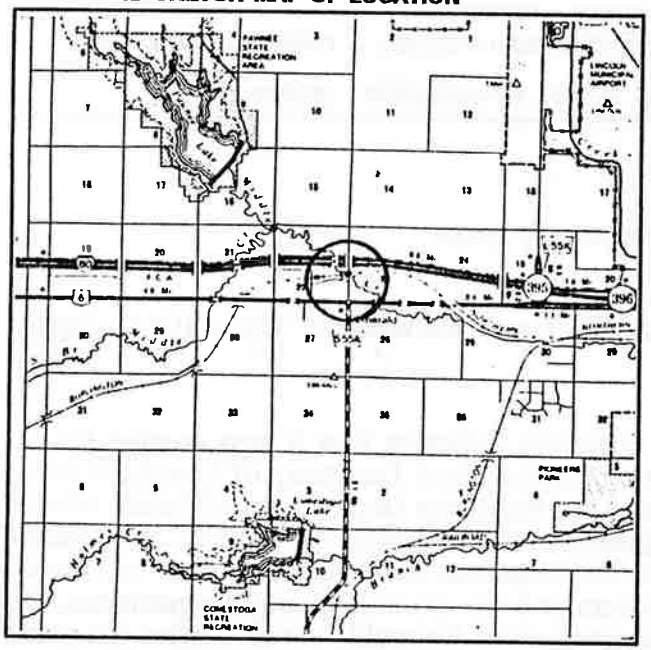
span number:	3	superstructure:	steel plate deck girder with concrete slab approach spans
span length:	81.0'	substructure:	concrete abutments, piers, and wingwalls
total length:	320.0'	floor/decking:	concrete with ballast
roadway wdt.:	10.0'	other features:	bridge plaque: **Wisconsin Bridge and Iron Co., North Milwaukee, Wisc. 1921; Capital Steel Co., Lincoln, Nebr. 1973**

County records do not contain information about this railroad overpass. A plaque on the structure indicates that it was erected by the Wisconsin Bridge and Iron Company of North Milwaukee in 1921. Another plaque states that Capital Steel Company of Lincoln worked on the structure in 1973, apparently widening the deck. An article in the August 1921 issue of the Nebraska Department of Public Works' **Monthly Report** includes an interview about grade separations with the Assistant Chief Engineer of the Chicago, Burlington, and Quincy Railroad, predecessor to the Burlington Northern Railroad. He does not discuss this bridge, but mentions that "six miles west of Lincoln on the D.L. & D. highway [U.S. Route 6]... with the co-operation of the County Commissioners and the State Highway Department, the Railroad constructed a subway for the new highway." This is presumably the railroad overpass east of Emerald, which carries the same rail line that passes over C005520923. The engineer added that "travel on both railroad and highway is very heavy at this place."

Separation of grades became an important issue in the 1920s as the growth of vehicular traffic resulted in increased accidents at rail crossings. An engineer in 1921 noted that "considering the fact that railroad grade crossings in Nebraska average about 1.7 per mile, the magnitude of the subject can be more readily appreciated." This overpass built in response to this problem. The structure's integrity was harmed by the 1973 alteration.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C005520923; "Information to Ponder Over in regard to the Elimination of Railroad Grade Crossings in connection with Highway Construction," Nebraska Department of Public Works Monthly Report, August 1921, pp. 8-10; field inspection by Fred Quivik, 27 February 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Rock Creek Bridge
NDOR: C005523745

LANC15

DATE(S) OF CONSTRUCTION
1978-79

LOCATION
North 112th Street over Rock Creek; S1/6, T12N, R7/8E
6.7 miles northeast of Davey; Lancaster County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 32)

CONDITION
excellent

OWNER
Lancaster County

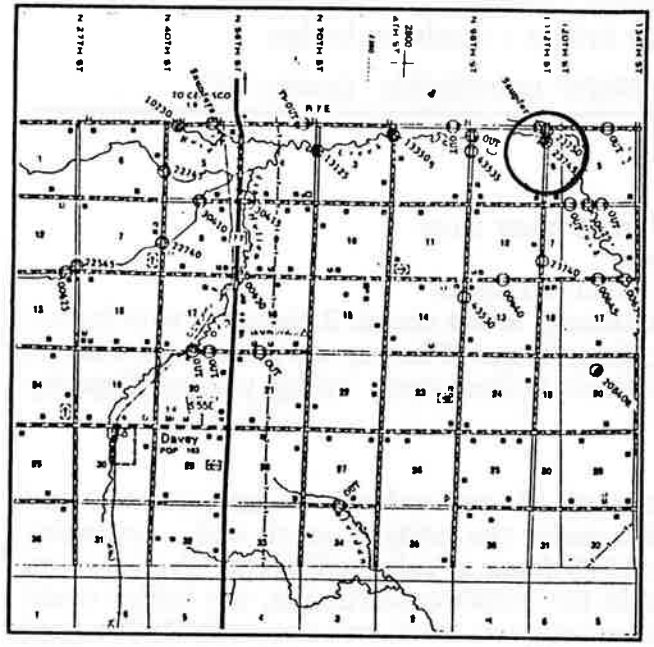
span number:	1	superstructure:	steel, 4-panel, rigid-connected polygonal Warren pony truss
span length:	80.0'	substructure:	I-beam piles with timber back- and wingwalls
total length:	84.0'	floor/decking:	concrete on vaulted corrugated steel over I-beam stringers
roadway wdt.:	25.0'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 channels with batten plates; vertical: I-beams; diagonal: I-beams; floor beam: H-beam; moveable end: rocker; strut: angles; lateral bracing: 2 angles; guardrail: hollow steel; bridge plaque: **Capacity 20 tons 1978**

This bridge carries North 112th Street, an unpaved north-south road, over Rock Creek just south of the border between Lancaster and Saunders Counties. Remnants of an I-beam pile abutment from a previous bridge are visible under the bridge's south end. According to Lancaster County bridge records, the truss was built by the Midwest Bridge Company in 1979 from a "salvaged" truss. A plaque on the bridge reads "Capacity 20 tons 1978." Given the heavy I-beams and other members used in the truss's construction, the bridge could conceivably have been built in the late 1970s. It is also possible that it dates from sometime between 1945 and the early 1970s, and was moved to this site in 1978/79. It is very similar to another 80-foot truss over Rock Creek in Lancaster County (**LANC07**), which is also said to date from 1978.

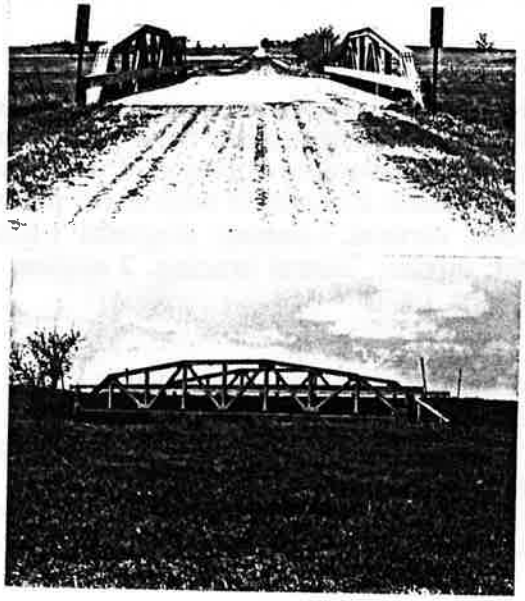
This bridge is of recent construction. Since neither the crossing nor the structure's technology appear to be noteworthy, the bridge is not significant.

NAME(S) OF STRUCTURE
Rock Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C005523745; Lancaster County Bridge Record, located at the Lancaster County Courthouse, Lincoln, Nebraska; field inspection by Mary McCormick, 28 February 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: SS55G00152

LANC16

DATE(S) OF CONSTRUCTION
1938

LOCATION
S55G Hickman Spur over Unnamed stream; S30/31, T8N, R7E
2.0 miles west of Hickman; Lancaster County, Nebraska

USE (ORIGINAL / CURRENT)
highway bridge / highway bridge

RATING determined NRHP eligible (score: 23)

CONDITION
poor

OWNER
State of Nebraska

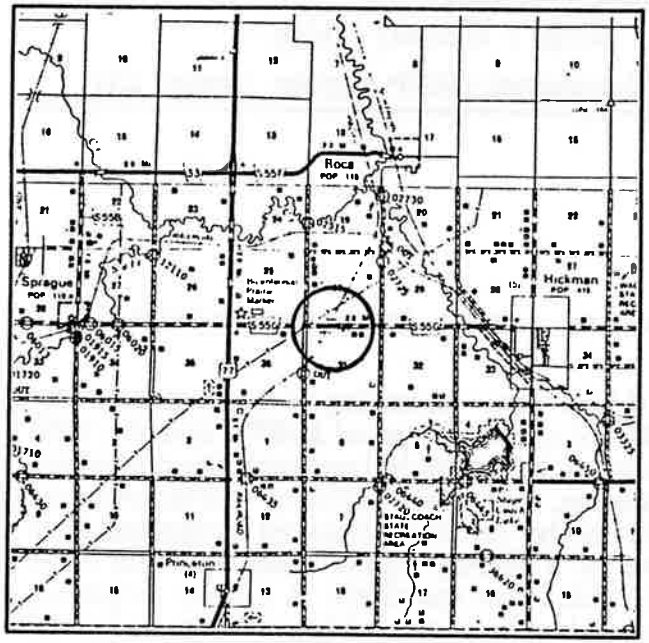
span number:	1	superstructure:	stone arch
span length:	25.0'	substructure:	stone
total length:	26.0'	floor/decking:	asphalt
roadway wdt.:	24.0'	other features:	finished (hammered) voussoirs; string and coping courses; tooled mortar joints

This stone arch structure carries State Spur S-55G over a small streambed two miles west of Hickman. According to Lancaster County bridge records, it was built jointly by the county and the WPA, with the county paying $1029 of the total cost of $9879, and the WPA funding the remainder. The barrel of this stone arch bridge differs from that of the other stone arch bridges in Lancaster County, which display the relatively crude construction technique of laying rubble voussoirs upon the centering, and then shoveling mortar over the extrados, allowing the mortar to settle into spaces between the voussoirs. The voussoirs of this bridge are finely finished blocks and have tooled mortar joints. A distinctive line is formed by the keystones, which consist of stones of a slightly lighter shad than the other voussoirs. The ring stones on the north side are smooth-finished in contrast to the split-faced finish of the spandrels. A slightly projecting string course at the level of the roadway and a coping course delineate the parapets along each side of the bridge. Foreman for the project was Harlie Skaggs, who oversaw construction of a number of bridges in the county during this period including C005504735 and C005506805, both steel stringer spans with ashlar-faced abutments and wingwalls.

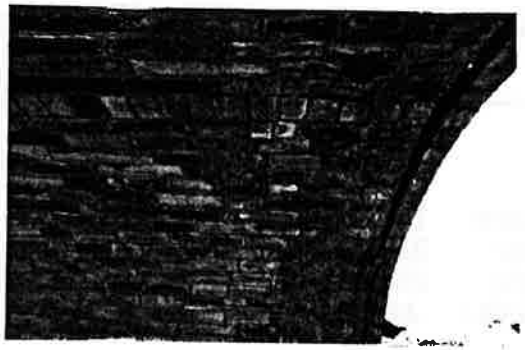
This bridge is the longest and one of the most finely-detailed of the stone arch bridges built with Works Progress Administration funding in Lancaster County during the 1930s. It is a noteworthy product of the federal aid programs of the period, which were developed not only to improving the nation's infrastructure but, just as importantly, to provide employment for those out of work as a result of the Depression.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number SS55G00152; Lancaster County Commissioners Record, 1 September 1936 and Lancaster County Bridge Records, located at the Lancaster County Courthouse, Lincoln, Nebraska; "Preliminary Determination of Eligibility for Bridge No. SS55G00152; field inspection by Fred Quivik, 28 February 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Salt Creek Bridge
NDOR: U142503605

LANC17

DATE(S) OF CONSTRUCTION
1946

LOCATION
West A Street over Salt Creek; S27/34, T10N, R6E
Lincoln; Lancaster County, Nebraska

USE (ORIGINAL / CURRENT)
city roadway bridge / city roadway bridge

RATING not yet NRHP non-eligible (score: 29)

CONDITION
good

OWNER
City of Lincoln

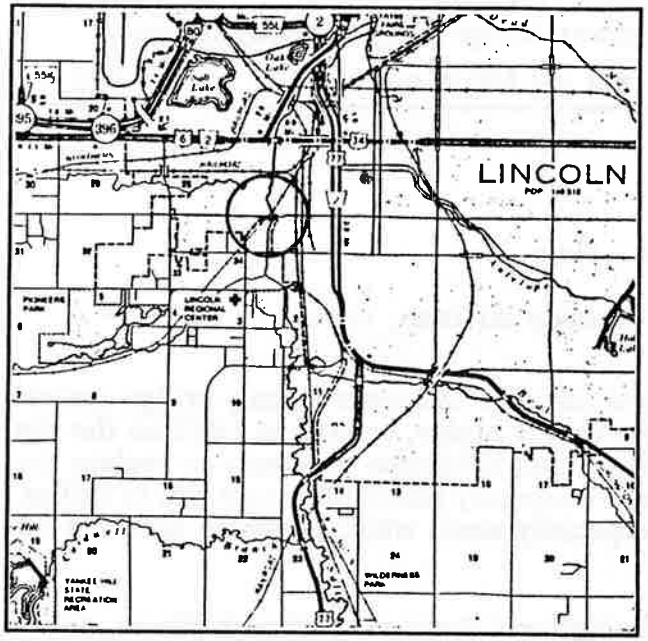
span number:	3	superstructure:	concrete parabolic girders
span length:	70.0'	substructure:	concrete abutments with wingwalls; concrete piers
total length:	174.0'	floor/decking:	concrete
roadway wdt.:	24.0'	other features:	concrete balustrade; bridge plaque: **L-92, Capacity 20 Tons, 1946**

This bridge, which is slightly on a skew, carries West A Street over the Salt Creek in the City of Lincoln. Lancaster County bridge records indicate that the structure was built by Dobson and Robinson in 1946 to replace a temporary timber bridge, erected in 1942 on the site of an earlier steel truss. A bridge plaque confirms the 1946 construction date. It seems likely that it became necessary to replace the steel truss in 1942. Due to the war, however, construction materials were hard to obtain and a temporary timber structure had to suffice. Even for several years after the war it was very difficult to get bridge-building materials, especially steel, which probably accounts for the 1946 structure's concrete girder design.

The 1946 construction date is too recent to allow consideration of this bridge to listing on the National Register of Historic Places, which requires structures to be at least fifty years old unless a claim of outstanding significance can be justified. This bridge does not appear to meet this exception. As one of the first major bridges built in Nebraska after the construction hiatus of World War II, the bridge deserves consideration in 1996.

NAME(S) OF STRUCTURE
Salt Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number U142503605; Lancaster County Bridge Records, located in the Lancaster County Courthouse, Lincoln, Nebraska; bridge plaque; field inspection by Fred Quivik, 28 February 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Tenth Street Viaduct LANC18
NDOR: U142512130P

DATE(S) OF CONSTRUCTION
1910; 1936

LOCATION
North 10th Street over Burlington Northern Railroad; NE1/4 S23, T10N, R7E
Lincoln; Lancaster County, Nebraska

USE (ORIGINAL / CURRENT)
city street overpass/ city street overpass

RATING determined NRHP eligible (score: 56)

CONDITION
good

OWNER
City of Lincoln

span number:	19	superstructure:	17, through, steel plate girders; 2, deck, steel plate girder approach spans
span length:	121.0'	substructure:	2 channels with lacing bars on concrete spot footings; concrete abutments and ramp
total length:	900.0'	floor/decking:	asphalt over timber deck
roadway wdt.:	29.0'	other features:	stringers: I-beams riveted to web of floor beam; floor beam: plate girder; guardrail: 2 pair angles with lacing; sidewalk: cantilevered timber on timber stringers

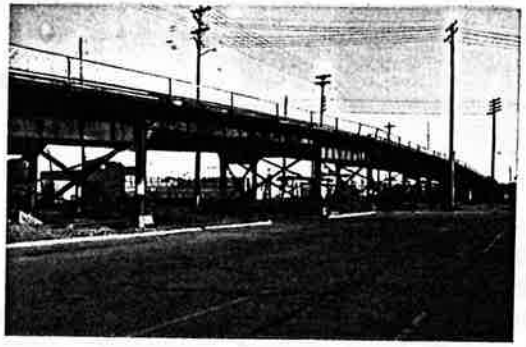
The North Tenth Street Viaduct, located near the University of Nebraska campus in Lincoln, was completed by the Chicago, Burlington and Quincy, Missouri Pacific, and Chicago North Western railroads in 1910. E. LaManna of Kansas City, Missouri was the engineer in charge of the project. Maintenance of the structure was delegated by the three companies to the C. B. & Q. Railroad. In 1936, the City of Lincoln entered into a contract with the Nebraska Department of Roads and the three railroads to "rebuild" the viaduct. It appears that major repairs to the superstructure were completed, including some new stringers, minor modifications to the main girders, replacing the timber deck of the roadway, and widening the roadway by cantilevering the two sidewalks outside of the main structure. The bridge was also repaired in 1962, when a new concrete deck was installed and some additional structural work was undertaken.

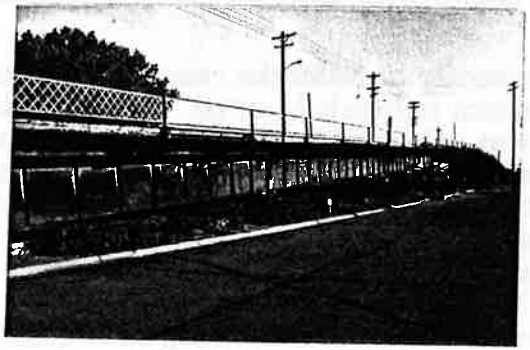
The Tenth Street Viaduct represents an important step in Lincoln in developing an effective urban transportation system, specifically with regard to separating train and automobile traffic. The intact built-up steel piers, plate girders, and latticed guardrail make the bridge a good example of the kind of grade separation viaducts which were built during the turn-of-the-century period. The bridge is the last of its kind in Lincoln.

NAME(S) OF STRUCTURE
Tenth Street Viaduct

PHOTOS AND SKETCH MAP OF LOCATION

LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number U142512130P; Lincoln City Council Minutes, located at the Lincoln City Hall, Lincoln, Nebraska, 8 August 1910, 30 November 1936; "Special Design Class Tenth Street Viaduct, drawings on file at the Nebraska Department of Roads, Lincoln, Nebraska; field inspection by Fred Quivik, 28 February 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Birdwood Creek Bridge
NDOR: C005602205

LINC01

DATE(S) OF CONSTRUCTION
1923

LOCATION
county road over Birdwood Creek; S2, T14N, R33W
5.3 miles northeast of Sutherland; Lincoln County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 32)

CONDITION
good

OWNER
Lincoln County

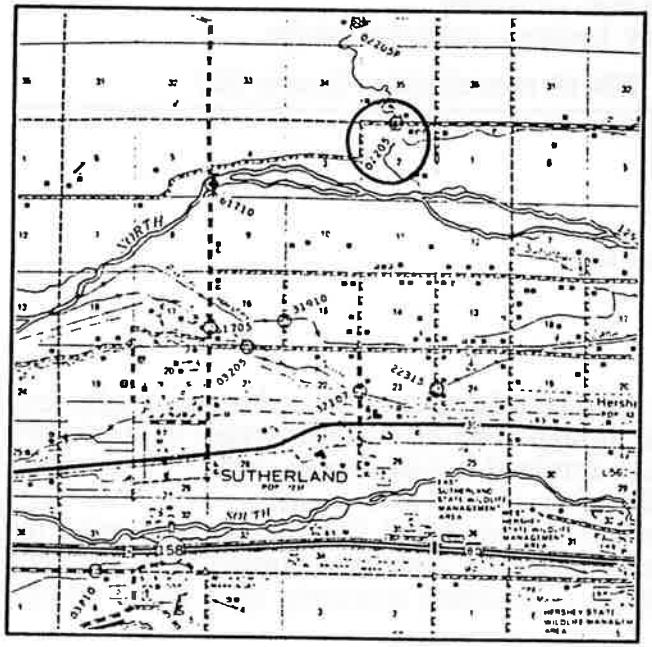
span number:	1	superstructure:	steel, transverse joist through girder
span length:	60.0'	substructure:	steel pile bent abutments with timber wingwalls
total length:	60.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	16.0'	other features:	lattice guardrails

Situated just over five miles northeast of Sutherland, this small-scale steel structure carries a gravel-surfaced county road across Birdwood Creek in western Lincoln County. Built as a single-span, transverse joist through girder, the bridge rests on a substructure of steel pile bent abutments with timber wingwalls. This bridge has not suffered any alterations and has retained a remarkable degree of physical integrity. The Birdwood Creek Bridge is one of twelve small-scale structures built in 1923 after June floods washed out all but one existing span over West Birdwood Creek. That year the Lincoln County Commissioners contracted with Allied Contractors of Omaha to erect the replacement structures (aggregate cost: $21,440.80). Using a standard plan promulgated by the Nebraska Bureau of Roads and Bridges, Allied completed this single-span structure by year's end. The Birdwood Creek Bridge has carried relatively light traffic since, in essentially unaltered condition.

The transverse joist girder configuration was reportedly developed by Robert Zale Drake, proprietor of the Standard Bridge Company of Omaha, in the early 20th century. Adopted by the Nebraska State Engineer's Office as early as 1917, it was used it extensively throughout the 1920s for both large and small crossings. Transverse joist girder spans were typically fifty to sixty feet, with roadways ranging from 16 to 20 feet wide. By 1927, by one report, more than 1,000 transverse joist girders had been built in Nebraska. Though much smaller and less visually prepossessing than such multiple-span examples such as the Hershey State Aid Bridge (**LINC03**) and the Boelus State Aid Bridge (**HOWA02**), this structure is noteworthy as one of the better-preserved single-span examples in Nebraska of this indigenous structural type.

NAME(S) OF STRUCTURE
Birdwood Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number: C005602205; Lincoln County Commissioners' Record, Book 9: 28 January 1924 (page 265), located at Lincoln County Courthouse, North Platte, Nebraska; field inspection by Clayton Fraser, 3 May 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Curtis Creek Bridge
NDOR: C005609405

LINC02

DATE(S) OF CONSTRUCTION
ca.1925

LOCATION
county road over Curtis Creek; S24, T9N, R28W
14.2 mile east of Wellfleet; Lincoln County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 19)

CONDITION
good

OWNER
Lincoln County

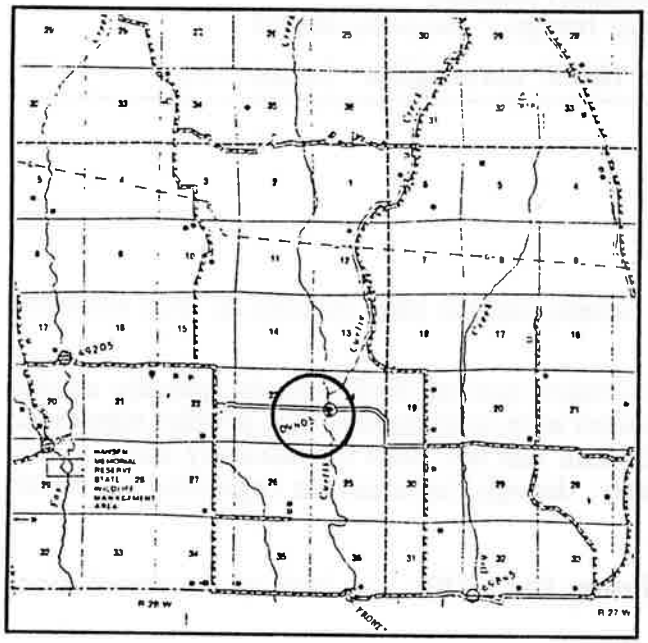
span number:	1	superstructure:	concrete filled spandrel arch
span length:	23.0'	substructure:	concrete abutments and wingwalls
total length:	27.0'	floor/decking:	gravel over earth fill
roadway wdt.:	16.6'	other features:	solid concrete parapet walls with recessed panels; incised lines formed in arch sidewalls

This small-scale concrete structure carries an unpaved county road across Curtis Creek 14 miles east of Wellfleet, in sparsely settled southeastern Lincoln County. The structure is composed of a single-span, concrete filled spandrel arch with an elliptical profile, supported by concrete abutments and wingwalls. The structure appears to have been built circa 1925, and has not been significantly altered over the years. As a result, it retains an overall high degree of historical integrity. Unfortunately, though, information regarding the small span's construction history has not been uncovered from county records.

The Cutis Creek Bridge typifies short-span reinforced concrete construction in Nebraska during the 1920s. Its lack of documentation, however, limits in interpretive value.

NAME(S) OF STRUCTURE
Curtis Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C005609405; field inspection by Clayton Fraser, 5 July 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Hershey State Aid Bridge
NDOR: C005612930; C005612935

LINC03

DATE(S) OF CONSTRUCTION
1927-28

LOCATION
county road over the North Platte River; S8/9, T14N, R32W
2.4 and 2.7 miles north of Hershey; Lincoln County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP eligible (score: 62)

CONDITION
fair

OWNER
Lincoln County

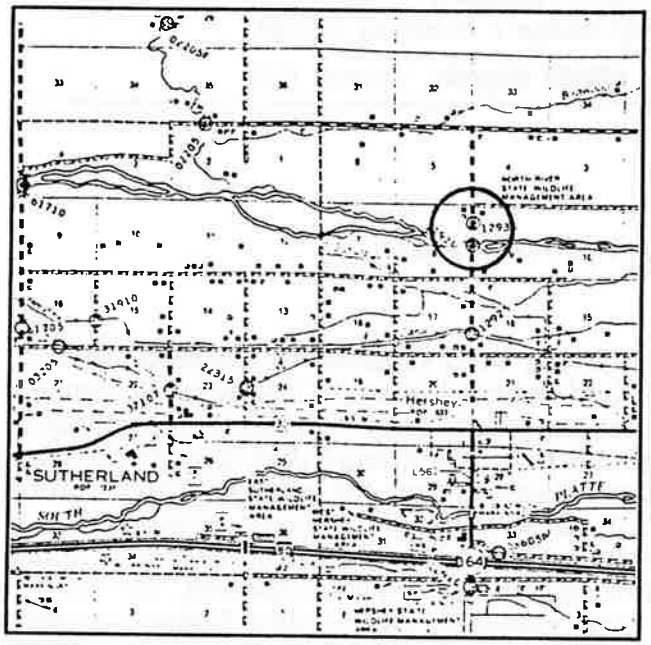
span number:	9; 5	superstructure:	steel, transverse joist through girder
span length:	50.0'	substructure:	concrete abutments and wingwalls with steel pile bent piers
total length:	452.0; 250.0'	floor/decking:	asphalt over black gum timber deck
roadway wdt.:	16.0'	other features:	lattice guardrails

By 1927 only three long timber pile bridges remained in use in Lincoln County, the rest having been replaced by concrete or steel structures. Two of these spanned main and overflow channels of the North Platte River, north of the small town of Hershey. In January 1927 the Lincoln County Commissioners declared an emergency, due to the bridges' deteriorated condition, and they ordered repairs made by the General Construction Company of Omaha, which then held the county's annual bridge contract. The county then applied for state aid to help defray the considerable costs to build replacement structures. Unsure of the best design to use, the state engineer's office later that year delineated no less than twelve bridge configurations for the Hershey site in its bid solicitation. Multiple proposals were received in October 1927 from four Nebraska bridge contractors: the Standard Bridge Company, Monarch Engineering Company, Allied Construction Company and the General Construction Company. After negotiating with low bidder General Construction, the county awarded a construction contract for $42,277.96 for both structures. As described by the state engineer, the Hershey Bridge (actually two bridges separated by an island) as built consisted of "nine 50-foot girder spans on the south bridge and five 50-foot girder spans on the north bridge. These spans are of the Transverse Joist Girder type with wood floors of black gum with a 16-foot roadway. The abutments for the south channel are made up of 50-foot 8-inch H steel piles encased in concrete. The north channel abutments are of the same type with steel piles 55 feet long. All piers consist of bare steel piles with steel caps. All bents are securely braced from cap to water line with cross bracing of steel channels." The contract for the extensive fillwork between the two channels of the river went to David Scott and Sons of North Platte. Completed late in 1928, the Hershey bridges have carried county road traffic since, in essentially unaltered condition.

"The old bridge at Hershey was in very bad shape and it being only 10 feet wide, only one vehicle could cross at a time," the county commissioners reported at its completion. "With the new bridge two vehicles can cross at a time and the people in the vicinity will welcome the completion of it." A regionally important crossing of the Platte River, the Hershey State Aid Bridge is historically significant for their association with the state aid bridge program, an imminently successful venture by the Nebraska state legislature in developing the state's transportation system. It is technologically significant as one of the best examples remaining in Nebraska of the transverse joist girder configuration. Developed by Nebraska bridge builder Robert Drake, this particularly indigenous structural type was used extensively in the 1920s for both large- and small-scale crossings throughout the state.

NAME(S) OF STRUCTURE
Hershey State Aid Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Numbers C005612930 and C005612935; Lincoln County Bridge Record: Bridge Number 7, Hershey Bridge[s]; Lincoln County Commissioners' Record, Book 9: 11 January 1927 (page 587), 24 January 1927 (page 590), 3 October 1927 (page 661), 10 October 1927 (page 668), 21 January 1929 (page 111), 30 January 1928 (pages 18-19), located at Lincoln County Courthouse, North Platte NE; Nebraska Department of Public Works, **Seventeenth Biennial Report**, 1927-28, pages 87-88; Aivars G. Ronis, "Nebraska State Aid Bridges," typewritten report by Nebraska Department of Roads, 1971, revised September 1978, n.p.; field inspection by Clayton Fraser, 3 May 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
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Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Sutherland State Aid Bridge [Birdwood Bridge] LINC04
NDOR: C005661710

DATE(S) OF CONSTRUCTION
1914-15

LOCATION
county road over the North Platte River; S4/5, T14N, R33W
4.2 miles north of Sutherland; Lincoln County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP eligible (score: 72)

CONDITION
fair

OWNER
Lincoln County

span number:	14	superstructure:	concrete filled spandrel arch
span length:	50.0'	substructure:	concrete abutments, wingwalls and piers on timber piles
total length:	795.0'	floor/decking:	asphalt over concrete deck
roadway wdt.:	16.0'	other features:	solid concrete guardrails with recessed panels; bush-hammered panels on arch sidewalls and pier pylons; angled concrete cutwaters on upriver face of piers

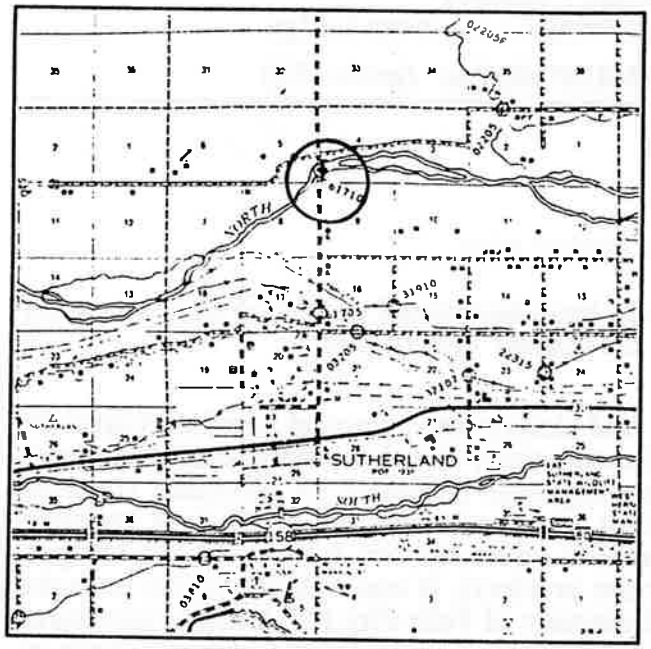
By 1912 the existing timber pile bridge over the North Platte River north of Sutherland had deteriorated beyond repair. Voters in Birdwood Precinct in which the bridge lay voted a bond issue in April 1912 and again the following year, and the county sought financial assistance from the newly formed state aid bridge fund. Early in 1914 the Nebraska State Engineer produced six alternate concrete designs for a multiple-span structure at Sutherland. The designs delineated fourteen 50-foot concrete arches or 23 33-foot concrete girders, with a variety of substructures and either 16-foot roadways or 12-foot roadways with a wider 20-foot turnout at the bridge's center. When Lincoln County solicited bids in April for the Birdwood Bridge (so named for the precinct), it received responses from six bridge contractors: the Midland Bridge Company of Kansas City MO, Monarch Engineering Company of Falls City NE, Omaha Structural Steel Works, Central Construction Company of Colorado Springs CO, and J.L. Mullen and the Lincoln Construction Company, both of Lincoln NE. The county awarded the contract to the Lincoln Construction Company for the arches on wood pile foundations. The Lincoln-based firm began soon thereafter, assembling a large crew at the site. Work progressed throughout the remainder of 1914 and into the following year. At the end of December, 1915, the immense structure, by now called the Sutherland State Aid Bridge, was completed. Total cost: $36,345. The Sutherland Bridge has carried traffic since, in unaltered condition.

The significance of the Sutherland State Aid Bridge to the history of Nebraska bridge building can hardly be understated. This remarkable structure is historically significant as a regionally important crossing of the North Platte River along the state's heavily settled Platte River corridor. The Sutherland Bridge is also important as perhaps the best example remaining of the state aid bridges. Although some 77 structures were built throughout the state under this program between 1912 and 1936, only 17 remain in use. Of these, only the Carns State Aid Bridge (**ROCK01**) predates Sutherland, but it has been substantially altered. The Sutherland Bridge is technologically significant as the best example in the state of concrete arch construction. Of the 17 multiple-span concrete arch bridges built under the state aid program in the 1910s and 1920s, all but the Sutherland Bridge have been destroyed or substantially altered, leaving this structure as the sole intact example of this important construction trend. The Missouri River bridges aside, the Sutherland State Aid Bridge is the most important vehicular span in Nebraska.

NAME(S) OF STRUCTURE

Sutherland State Aid Bridge [Birdwood Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C005661710; Lincoln County Bridge Record: Bridge Number 6, Birdwood Bridge; Lincoln County Commissioners' Record, Book 7: 5 March 1912 (pages 89-92), 12 April 1912 (pages 96-97), 30 April 1912 (page 100), 5 February 1913 (pages 146-48), 13 March 1913 (page 155), 2 March 1914 (page 208), 6 April 1914 (pages 213-14), 20 May 1914 (page 228), 19 July 1915 (page 325), 30 December 1915 (page 373), located at Lincoln County Courthouse, North Platte, Nebraska; Nebraska Department of Public Works, **Tenth Biennial Report**, 1912-14, pages 251-52; Aivars G. Ronis, "Nebraska State Aid Bridges," typewritten report by Nebraska Department of Roads, 1917, revised September 1978, n.p.; field inspection by Clayton Fraser, 3 May 1989.

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Brady State Aid Bridge
NDOR: SL56D00147

LINC05

DATE(S) OF CONSTRUCTION
1924-25; 1955; 1977

LOCATION
State Link 56D over North Channel of the Platte River; S11, T12N, R27W
0.5 mile southwest of Brady; Lincoln County, Nebraska

USE (ORIGINAL / CURRENT)
highway bridge / highway bridge

RATING NRHP non-eligible (score: 29)

CONDITION
excellent

OWNER
Nebraska Department of Roads

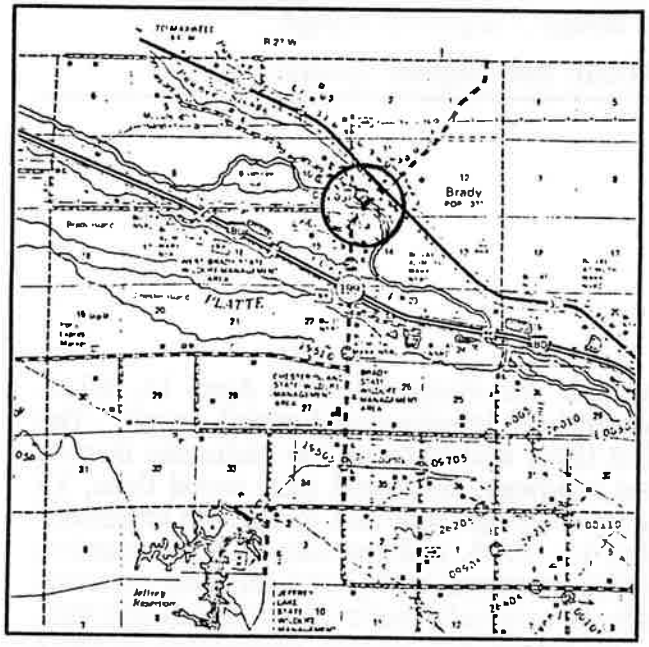
span number:	6	superstructure:	steel stringer
span length:	63.0'	substructure:	concrete abutments and piers
total length:	621.0'	floor/decking:	concrete deck over steel stringers
roadway wdt.:	22.0'	other features:	Armco guardrails

Lincoln County first applied for state aid in the erection of this crossing of the North Channel of the Platte River on April 14, 1917. Located at the southwestern edge of the small town of Brady, the existing timber pile structure had deteriorated beyond repair. The application, though, remained on file for more than seven years, until the fall of 1924. At that time, according to the Nebraska Bureau of Roads and Bridges, "Plans were drawn for six, 63 foot span transverse joist girders, 16 foot roadway, creosoted gum wood floor, 15 ton capacity. The foundations consisted of 8 and 10 in. Beth[lehem] Hs. 50 ft. long extending up to bridge seat and incased in concrete." Bids were received for the bridge's construction at the Lincoln County Courthouse on November 13, 1924, and the General Construction Company of Omaha was awarded the contract for $26,740. (A contract for approach fills, jetties, mattress and guard rail was awarded to David Scott and Son of North Platte NE for $6827.70.) The crossing carried vehicular traffic as originally built until the fall of 1955. Late that year the entire superstructure was replaced by a series of rolled I-beam stringers. The bridge was further remodeled in 1977 by the addition of four 60-foot steel stringers on the south end.

The Brady State Aid Bridge as originally constructed was a typical example of transverse joist girder construction. All but the piers of the original bridge have subsequently been all but completely removed, however, and the existing structure should more appropriately be dated to the 1955 replacement of the superstructure.

NAME(S) OF STRUCTURE
Brady State Aid Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number SL56D00147; Aivars G. Ronis, "Nebraska State Aid Bridges," typewritten report by Nebraska Department of Roads, 1971, revised September 1978, n.p.; Nebraska Department of Public Works, **Fifteenth Biennial Report**, 1923-24, pp. 151, 153, 156; State of Nebraska, Department of Roads and Irrigation, Special Design plans for 6, 63-foot spans, deck steel girder bridge, Lincoln County, August 1955; field inspection by Clayton Fraser, 3 May 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Dry Creek Bridge
NDOR: C005900805

MADI01

DATE(S) OF CONSTRUCTION
1914

LOCATION
county road over Dry Creek; S16/21, T24N, R4W
2.6 miles northwest of Meadow Grove; Madison County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 33)

CONDITION
fair

OWNER
Madison County

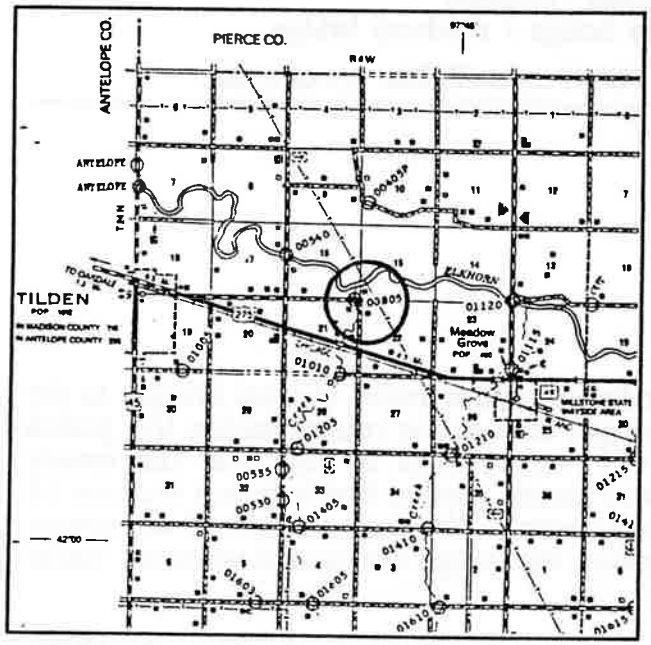
span number:	1	superstructure:	steel stringer
span length:	31.0'	substructure:	concrete abutments with timber wingwalls
total length:	32.0'	floor/decking:	gravel covered concrete deck with curbing
roadway wdt.:	24.2'	other features:	guardrail: 2 channels

Each year from 1907 through the mid-1920s, Madison County awarded its annual contract for the construction of steel bridges to the Western Bridge and Construction Company of Omaha. Among the numerous small-scale bridges built in the county during this period was this 32-foot steel stringer span, erected by Western during the winter of 1914. On January 14th of that year the county commissioners ordered Western to erect a 32-foot steel I-beam bridge with a 16-foot roadway on the section line between sections 16 and 21, Township 24 North, Range 4 West (approximately 2 1/2 miles northwest of Meadow Grove). Although minutes of the county board do not reference the span again, presumably it was built as planned. Since its completion, the bridge has carried vehicular traffic as originally built.

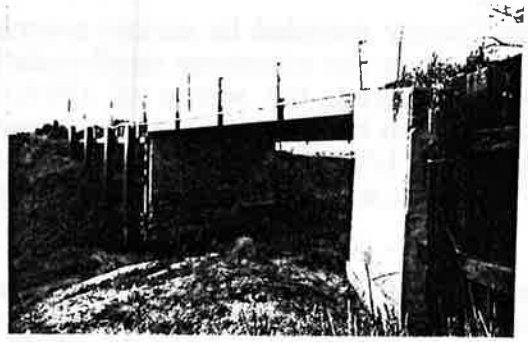
The Dry Creek Bridge is one of thousands of such small-scale, pinned Pratt pony trusses erected across Nebraska in the early 1900s. Located on a secondary county road, it has played only a marginal role in the development of central Nebraska transportation. With its modest dimensions and simple detailing, the Dry Creek Bridge is a typical, undistinguished example of an exceedingly common structural type in Nebraska.

NAME(S) OF STRUCTURE
Dry Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C0005900805; Madison County Board of Commissioners, Book 5: 17 January 1914 (page 379), 3 March 1914 (page 384), located at Madison County Courthouse, Madison, Nebraska; field inspection by Clayton Fraser and Sheila Bricher-Wade, 17 November 1989.

INVENTORIED BY
Clayton B. Fraser and Sheila Bricher-Wade

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Union Creek Bridge
NDOR: C005903305

MADI02

DATE(S) OF CONSTRUCTION
1914

LOCATION
county road over Union Creek; S34/35, T21N, R2W
6.7 miles southwest of Madison; Madison County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 36)

CONDITION
fair

OWNER
Madison County

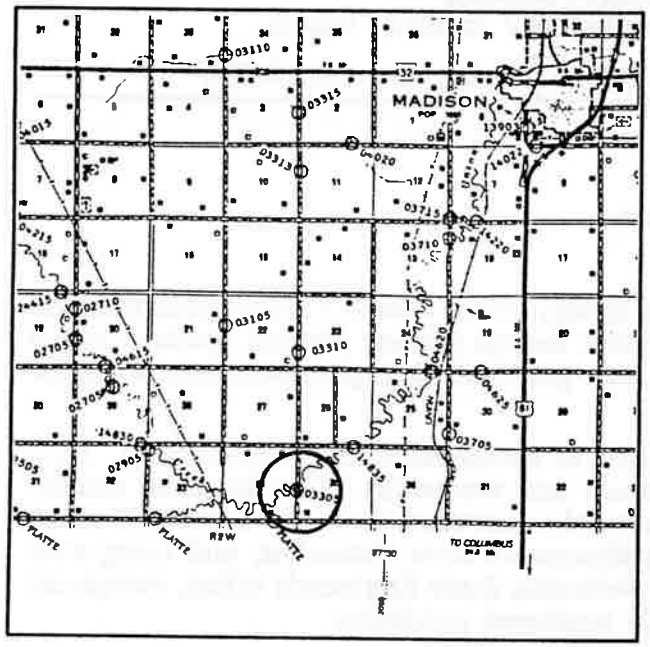
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt pony truss
span length:	60.0'	substructure:	concrete abutments and wingwalls
total length:	61.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	15.7'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 rectangular punched eyebars; vertical: 4 angles; diagonal: 1 square looped eyebar; lateral bracing: round bar; floor beam: I-beam, field bolted to vertical; guardrail: 2 angles; outriders: 2 angles

This small-scale bridge crosses Union Creek a little less than seven miles southwest of Madison in southeastern Madison County. Built as a pin-connected Pratt pony, the single span rests on a substructure of concrete abutments and wingwalls. The Madison County Commissioners first solicited competitive bids for this bridge early in 1914 and in March awarded the construction contract to the Western Bridge and Construction Company. The Omaha-based contractor began excavating for the abutments soon thereafter, and using steel components rolled in Pittsburgh by Cambria and Lackawanna and a standard design of the Nebraska State Engineer's office, completed the structure later that year. The Union Creek Bridge has carried traffic since, in essentially unaltered condition.

The Union Creek Bridge typifies short-span truss construction in Nebraska in the early 1900s. Built by one of the state's most prolific bridge erectors during a time of intense bridge construction activity, it fits well within the mainstream of technological trends for the period. Lacking any major historical significance in its present location and typifying an exceedingly common structural type in Nebraska, the Union Creek Bridge lacks an appreciable level of significance.

NAME(S) OF STRUCTURE
Union Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C005903305; Madison County Board of Commissioners, Book 5: 17 January 1914 (page 379), 3 March 1914 (page 384), located at Madison County Courthouse, Madison, Nebraska; field inspection by Clayton Fraser and Sheila Bricher-Wade, 17 November 1989.

INVENTORIED BY
Clayton B. Fraser and Sheila Bricher-Wade

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Union Creek Bridge
NDOR: C005904315

MADI03

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
county road over Union Creek; S33/34, T22N, R1W
1.5 miles east of Madison; Madison County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 32)

CONDITION
good

OWNER
Madison County

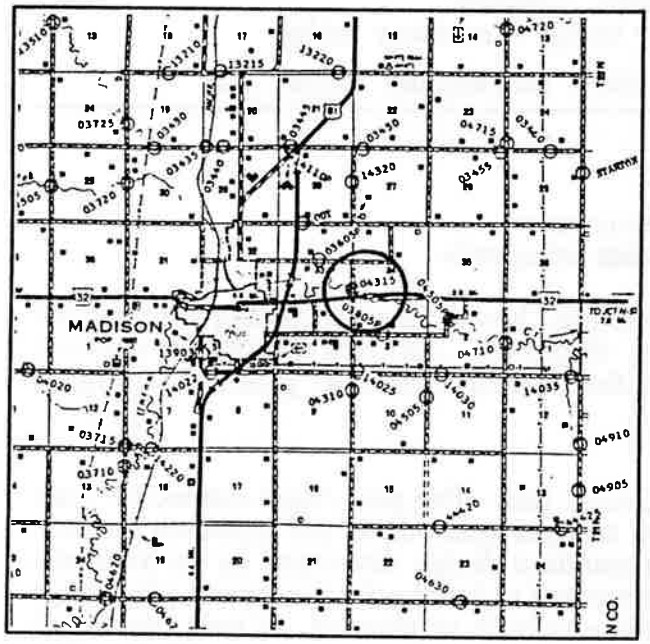
span number:	1	superstructure:	steel, 4-panel, pin- / rigid-connected Pratt pony truss
span length:	60.0'	substructure:	steel pile bent abutments and piers with timber wingwalls
total length:	100.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	15.8'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 rectangular punched eyebars; vertical: 2 angles with batten plates; diagonal: 2 punched rectangular eyebars; lateral bracing: round bar; floor beam: I-beam field bolted to vertical; guardrail: 2 angles; outriders: 2 angles

This small-scale bridge crosses Union Creek 1-1/2 miles east of Madison, near the Stanton County line. The pin- /rigid-connected Pratt pony truss rests on steel pile bent abutments and piers with timber wingwalls. A single steel stringer span forms the approach on each side. Comprised of steel components rolled by Inland Steel, the truss was fabricated using a standard design developed by he Nebraska Bureau of Roads and Bridges. On January 12, 1909 Madison County's Board of Commissioners voted to build a 90-foot wood pile bridge at this location. No subsequent references were found, so it is unknown if this wooden bridge was built as planned. If built, the wood pile bridge was relatively short-lived - perhaps having been washed out in a flood - because the steel pony truss currently at this location appears to have been built just a few years later, in about 1915. Each year between 1907 and the mid-1920s, Madison County awarded its annual contract for the construction of steel bridges to the Western Bridge and Construction Company of Omaha. Hence, this structure was almost assuredly built by Western. At some point the bridge has been raised by extending the piers and abutments. Otherwise, it has served to carry vehicular traffic since the mid-1910s in essentially unaltered condition.

The state bureau of roads developed standard plans for bridges as early as 1905 and distributed them to the counties, updating the designs periodically to reflect technological improvements. One of the most widely used standards in the 1910s was the 60-foot pony truss, which featured pinned connections with bolted gusset plates at the upper chords to form a pin- / rigid-connected hybrid. The Union Creek Bridge is one of many such standard designs still carrying traffic on Nebraska's secondary roads. With its construction history largely undocumented, it is one of the less distinguished examples of this common vehicular truss type.

NAME(S) OF STRUCTURE
Union Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C005904315; Madison County Board of Commissioners, Book 4, 12 January 1909 (page 611), located at Madison County Courthouse, Madison, Nebraska; field inspection by Clayton Fraser and Sheila Bricher-Wade, 17 November 1989.

INVENTORIED BY
Clayton B. Fraser and Sheila Bricher-Wade

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Union Creek Bridge
NDOR: C005904505P

MADI04

DATE(S) OF CONSTRUCTION
1912

LOCATION
county road over Union Creek; S2, T21N, R1W
2.9 miles east of Madison; Madison County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 35)

CONDITION
fair

OWNER
Madison County

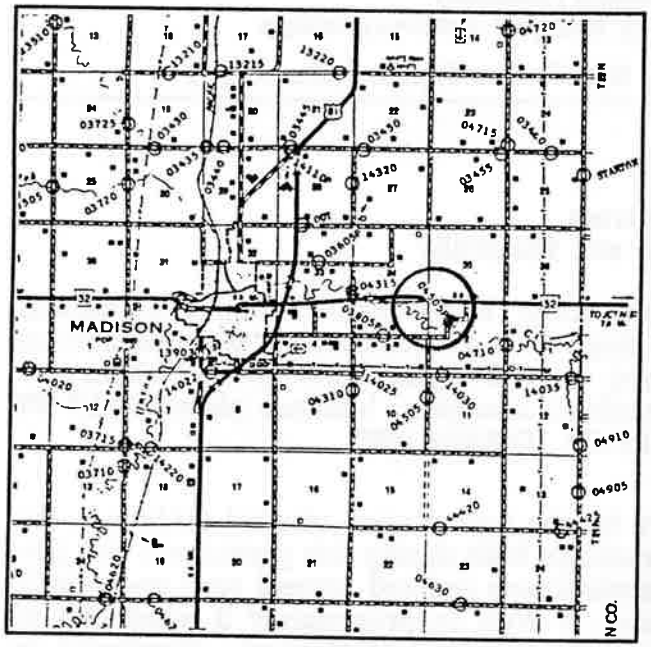
span number:	1	superstructure:	steel, 5-panel, pin-connected Pratt through truss
span length:	90.0'	substructure:	steel piles embedded in concrete abutments and wingwalls
total length:	91.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	15.7'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 looped rectangular eyebars; vertical: 2 channels with lacing; diagonal: 2 looped eyebars; 2 round eyebars with turnbuckles; lateral bracing: round bars; strut: 2 angles; floor beam: I-beam, field bolted to vertical below lower chord; guardrail: 2 angles; builder's plate: BUILT BY THE WESTERN BRIDGE & CONSTRUCTION Co. OMAHA.NEB.

Each year between 1907 and the mid-1920s, Madison County awarded its annual contract for the construction of steel bridges to the Western Bridge and Construction Company of Omaha. Among the numerous small-scale structures built during this period was this pin-connected Pratt through truss, erected in 1912. In February of that year the county commissioners ordered several new and rebuilt bridges, including a structure over Union Creek in section 2 of Township 21 North, Range 1 West (approximately 3 miles east of Madison). Although minutes of the county board do not reference the span again, evidently it was built as planned. Previously, in February 1908, the commissioners' minutes refer to replanking a bridge at this location. The 1912 through truss, therefore, must have been built as a replacement for a wood pile bridge. Today, the north abutment is partially collapsed. The truss, otherwise, has served to carry vehicular traffic as originally built.

In Nebraska, the pinned Pratt through truss was the bridge of choice for short- and medium-span applications in the early 1900s. Most of the structures erected during this period were based on standard plans developed either by the state engineer or by the individual bridge companies. As a result, hundreds of Pratts were built across the state, and today the Pratt truss constitutes the most populous group of through trusses. Though it retains a high degree of physical integrity, the Union Creek Bridge is unremarkable in its design, dimensions and detailing.

NAME(S) OF STRUCTURE
Union Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C005904505P; Madison County Board of Commissioners, Book 4: 5 February 1908 (page 575); Book 5, February 1912 (page 132); builder's plate; field inspection by Clayton Fraser and Sheila Bricher-Wade, 17 November 1989.

INVENTORIED BY
Clayton B. Fraser and Sheila Bricher-Wade

AFFILIATION
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Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Texley Bridge [Shell Creek Bridge] MADI05
NDOR: C005904605

DATE(S) OF CONSTRUCTION
1909

LOCATION
county road over Shell Creek; S20/29, T21N, R4W
2.3 miles northwest of Newman Grove; Madison County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 35)

CONDITION
good

OWNER
Madison County

span number:	1	superstructure:	steel, 3-panel, pin- / rigid-connected Pratt pony truss
span length:	50.0'	substructure:	timber pile abutments and pier with timber wingwalls
total length:	100.0'	floor/decking:	timber decking over steel stringers
roadway wdt.:	15.5'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 punched rectangular eyebars; vertical: 4 angles with batten plates; diagonal: 2 looped square eyebars with turnbuckles; lateral bracing: round bar; floor beam: I-beam field bolted to vertical: guardrail: 2 angles

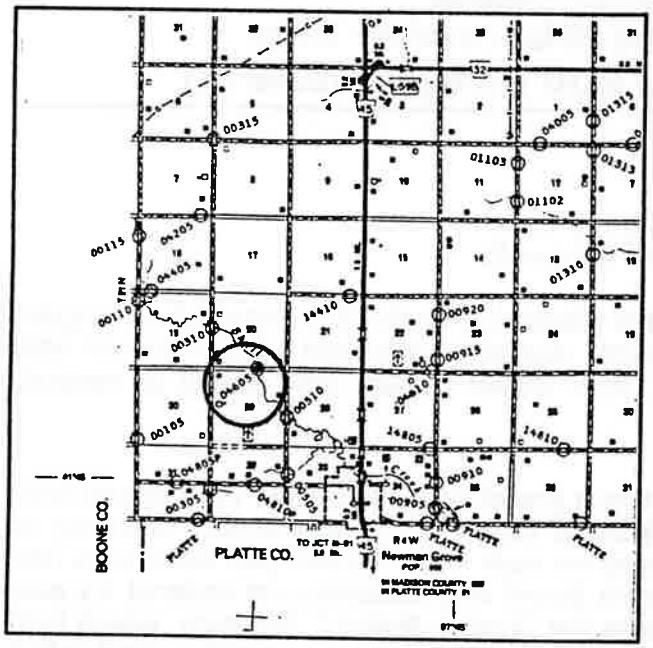
Located a little more than two miles northwest of Newman Grove, the small-scale bridge carries a gravel-surfaced county road across Shell Creek in Madison County's southwest corner. The structure was built in 1909 by the Western Bridge and Construction Company of Omaha as a pin- / rigid-connected Pratt pony truss flanked by timber stringer approach spans on each end. Timber pile abutments and pier with timber wingwalls comprised the substructure. In November 1908 Madison County's Board of Commissioners ordered six new bridges to be built, including this Shell Creek crossing northwest of Newman Grove, known as the "Texley Bridge." Western, which held Madison County's annual steel bridge contract continuously between 1907 and the mid-1920s, produced this structure using steel rolled by the Cambria mills and a standard design of the state engineer's office. Since its completion, the Texley Bridge has carried light vehicular traffic as originally built.

The Texley Bridge displays the design attributes of numerous similar Pratt pony trusses in Nebraska.

NAME(S) OF STRUCTURE

Texley Bridge [Shell Creek Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C005904605; Madison County Board of Commissioners, Book 4, 6 November 1908 (page 604), located at Madison County Courthouse, Madison, Nebraska; field inspection by Clayton Fraser and Sheila Bricher-Wade, 17 November 1989.

INVENTORIED BY

Clayton B. Fraser and Sheila Bricher-Wade

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Elkhorn River Bridge
NDOR: C005940615

MADI06

DATE(S) OF CONSTRUCTION
1906

LOCATION
county road over the Elkhorn River; S10/16, T24N, R1W
Norfolk; Madison County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 40)

CONDITION
good

OWNER
Madison County

span number: 1
span length: 70.0'
total length: 125.0'
roadway wdt.: 15.7'

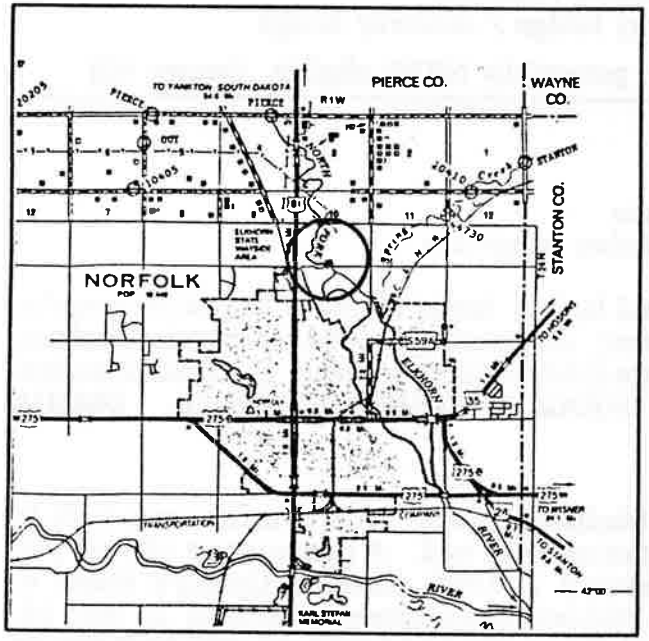
superstructure: steel, 4-panel, pin-connected Pratt pony truss
substructure: steel pile bent abutments and piers with timber wingwalls
floor/decking: timber deck over steel stringers
other features: upper chord: 2 channels with cover plate and lacing; lower chord: 2 looped rectangular eyebars; vertical: 2 angles with batten plates; diagonal: 2 looped rectangular eyebars; lateral bracing: round bar; floor beam: I-beam field bolted to vertical: guardrail: 2 angles; builder's plate: **BUILT BY THE WESTERN BRIDGE & CONSTRUCTION Co. OMAHA NEB**

This bridge carries a county road across the Elkhorn River in Norfolk, the county seat of Madison County. The structure was built in 1906 as a four-panel, pin-connected Pratt pony truss, flanked by steel stringer approach spans on each end. A substructure of steel pile bent piers and abutments with timber wingwalls provide support for the truss. On February 7, 1906, Madison County's Board of Commissioners ordered six new bridges to be built, including a 70-foot span across the Elkhorn River between sections 10 and 16, Township 24 North, Range 1 West. The Western Bridge and Construction Company received the contract and subsequently built the six bridges, including this span. A year later, in 1907, Western began a tenure during which they received Madison County's annual steel bridge building contract each year until the mid-1920s. The Elkhorn River Bridge is the only remaining span of the six bridges built by Western in 1906 and is the oldest vehicular truss remaining in Madison County. Since its completion, the bridge has carried vehicular traffic in essentially unaltered condition.

The Nebraska State Engineer and virtually all of the in-state bridge contractors developed standard designs for pinned Pratt pony trusses in the early 1900s. With a practical span range between 40 and 100 feet, this venerable truss configuration was well suited for the state's myriad small stream crossings. As a result, the counties purchased thousands of pinned Pratt ponies between 1900 and 1920, and they remain the most populous group by far among the trusses still in use on Nebraska's secondary road system. With its 1906 construction date, the Elkhorn River Bridge is a well-preserved, early example of small-scale bridge construction in Nebraska.

NAME(S) OF STRUCTURE
Elkhorn River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C005940615; bridge plate; Madison County Board of Commissioners, Book 4: 7 February 1906 (page 504), located in Madison County Courthouse, Madison, Nebraska; field inspection by Clayton Fraser, 17 November 1989.

INVENTORIED BY
Clayton B. Fraser and Sheila Bricher-Wade

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Prairie Creek Bridge
NDOR: C006103110

MERR01

DATE(S) OF CONSTRUCTION
1915; moved 1930

LOCATION
county road over Prairie Creek; S27/28, T15N, R6W
8.8 miles north of Central City; Merrick County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING determined NRHP non-eligible (score: 25)

CONDITION
good

OWNER
Merrick county

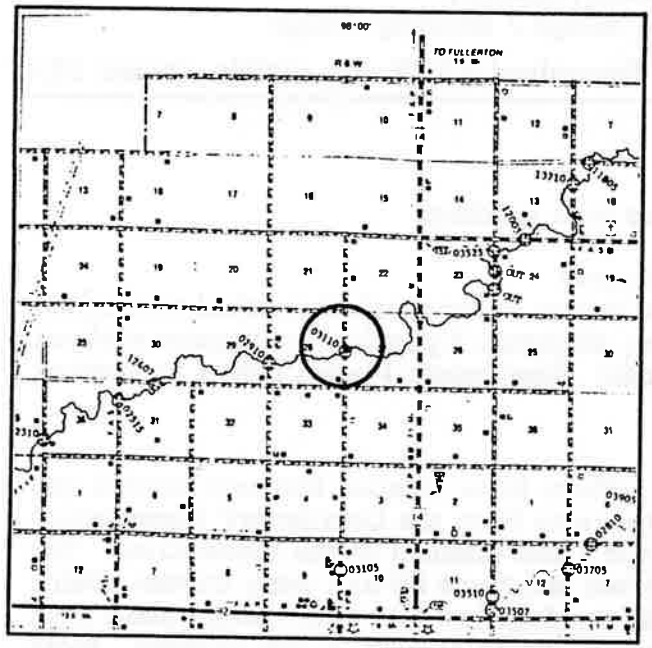
span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt pony truss with outriders
span length:	80.0'	substructure:	concrete abutments and wingwalls
total length:	82.0'	floor/decking:	earth covered corrugated steel over steel stringers
roadway wdt.:	16.0'	other features:	upper chord: 2 channels with cover plates and lacing; lower chord: 2 punched rectangular eyebars; vertical: 4 angles with batten plates; diagonal: 2 punched rectangular eyebars; lateral bracing: round bar with threaded ends; floor beam: I-beam bolted to vertical; guardrail: 2 channels

This single-span structure was originally part of an earlier multiple-span truss that spanned a Platte River channel between Merrick and Polk Counties. In May 1915 the Merrick County Supervisors ordered several small-scale structures from the Contractors' Construction Company of Omaha. The largest of the bridges purchased that year was a structure over the Third Channel of the Platte River. The new Clarks Bridge - a replacement for an earlier timber pile structure - consisted of one 60-foot and three 80-foot pony trusses. Using steel rolled by the Lackawanna mills in Pittsburgh, the bridge was completed in late 1915, but stood for just four years before plans were begun to replace it. In November 1919, Polk County applied for state aid to construct a new series of bridges at this crossing. Work was not begun for another ten years, however, and the new three span, steel-stringer structure (**MERR07**) was not finished until April 1930. The Merrick County Supervisors then hired the Western Bridge and Construction Company of Omaha to move the 1915 trusses from the Clarks Bridge to four separate locations around the county. Three of the original spans of the Clarks Bridge no longer exist. Thus, this 80-foot Prairie Creek crossing is the only remaining structure that was once part of the original Clarks Bridge. It too, though, is scheduled to be replaced in the near future.

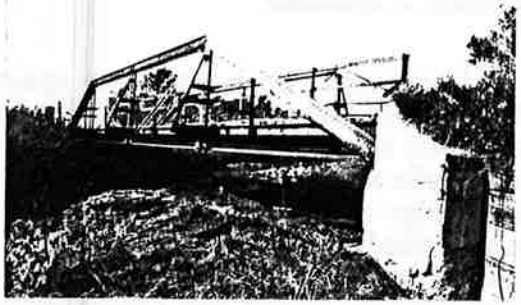
The remaining span of the Clarks Bridge typifies short-span truss construction in the 1910s. Built by one of Nebraska's smaller bridge erectors during a period of intense bridge construction activity in the state, it fits well within the mainstream of technological trends for the period. The bridge has suffered minor alteration in the replacement of its roadway deck, but is otherwise intact. Lacking any major historical significance in its present location and typifying an exceedingly common structural type in Nebraska, the Prairie Creek Bridge appears to lack any great degree of significance.

NAME(S) OF STRUCTURE
Prairie Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006103110; Merrick County Supervisors' Record, Book 5: 9 February 1915 (page 359), 25 May 1915 (page 377); Book 6: 4 December 1928 (page 359), 31 December 1928 (page 361), 1 April 1930 (page 400), located at Merrick County Courthouse, Central City, Nebraska; Nebraska Department of Public Works, **Seventeenth Biennial Report**, 1927-28, page 84; field inspection by Clayton Fraser, 27 September 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Prairie Creek Bridge
NDOR: C006104405

MERR02

DATE(S) OF CONSTRUCTION
ca.1912

LOCATION
county road over Prairie Creek; S15/22, T13N, R8W
9.0 miles west of Central City; Merrick County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 25)

CONDITION
good

OWNER
Merrick county

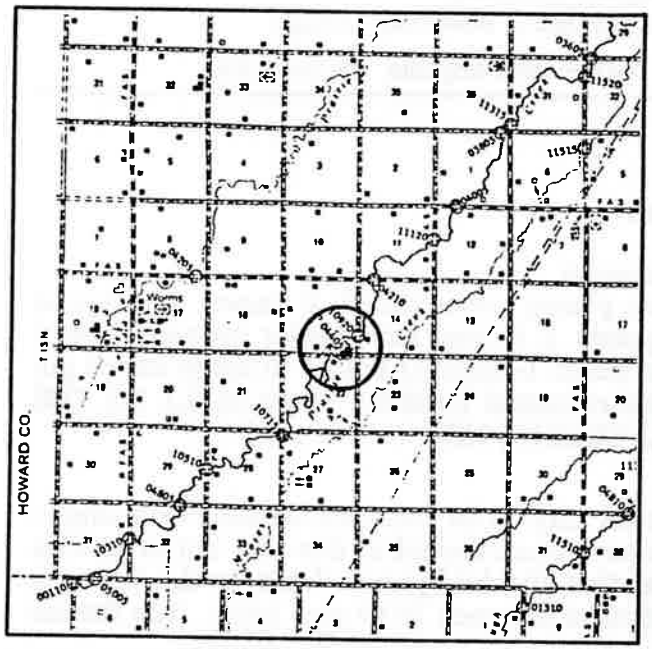
span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt pony truss
span length:	60.0'	substructure:	steel pile bents with timber wingwalls
total length:	61.0'	floor/decking:	earth covered corrugated steel over steel stringers
roadway wdt.:	16.0'	other features:	upper chord: 1 channel with cover and batten plates; lower chord: 2 looped rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 looped rectangular eyebars; lateral bracing: round bar with threaded ends; floor beam: I-beam, U-bolted to lower chord pin at vertical; guardrail: 2 steel angles; endpost-mounted builder's plate: **BUILT BY THE WESTERN BRIDGE & CONSTRUCTION Co. OMAHA, NEB.**

This bridge carries a gravel-surfaced county road across Prairie Creek nine miles west of Central City. The structure consists of a single-span, pinned Pratt pony truss, supported by steel pile bent abutments. The bridge appears to have been moved to this site, but otherwise is in good physical condition, and has not been structurally altered. A builder's plate notes that the bridge was built by the Western Bridge and Construction Company of Omaha, which held Merrick County's annual bridge contracts between 1910 and 1914. The Prairie Creek Bridge was fabricated from a standard design of the state engineer's office.

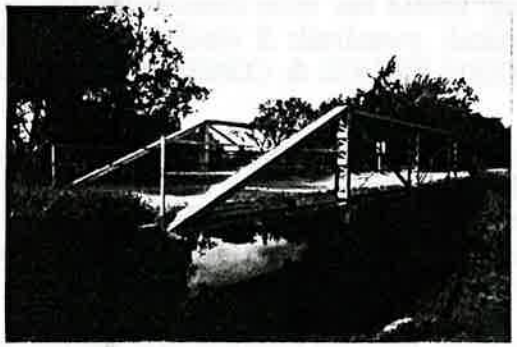
As a typical example of a relatively common structural type, with its construction history largely undocumented, the Prairie Creek Bridge enjoys only marginal historical and technological significance.

NAME(S) OF STRUCTURE
Prairie Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006104405; Merrick County Supervisors' Record, located at Merrick County Courthouse, Central City, Nebraska, refer to the following entries in Book 5: 11 January 1910 (page 32), 10 January 1911 (page 81), 9 January 1912 (page 155), 15 January 1913 (page 233), 13 January 1914 (page 297), 9 February 1915 (page 359); field inspection by Clayton Fraser, 27 September 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Warm Slough Bridge
NDOR: C006112305

MERR03

DATE(S) OF CONSTRUCTION
ca.1912

LOCATION
county road over Warm Slough; S13/14, T13N, R7W
4.4 miles southwest of Central City; Merrick County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 25)

CONDITION
good

OWNER
Merrick County

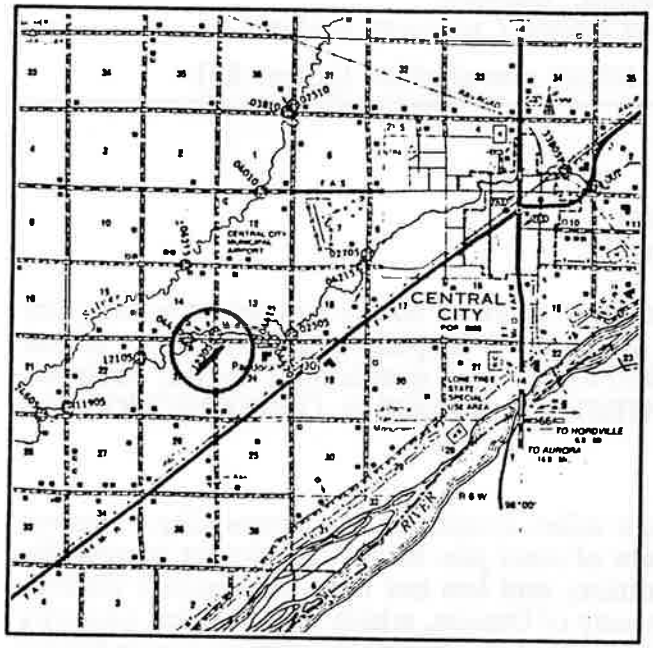
span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt pony truss
span length:	60.0'	substructure:	steel pile bent abutments and timber wingwalls
total length:	61.0'	floor/decking:	timber decking over steel stringers
roadway wdt.:	15.8'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 punched rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 looped square eyebars; lateral bracing: round bar; floor beam: I-beam bolted to vertical; guardrail: 2 angles; endpost-mounted builder's plate: **BUILT BY THE WESTERN BRIDGE & CONSTRUCTION Co. OMAHA, NEB.**

The Warm Slough Bridge carries an unpaved county road across a small stream about 4 1/2 miles southwest of Central City. Erected as a single-span, four-panel, pin-connected Pratt pony truss, the bridge rests on a substructure of steel pile bents with timber wingwalls. The bridge appears to have been moved to this site, but otherwise is in good physical condition, and has not been structurally altered. A builder's plate notes that the bridge was built by the Western Bridge and Construction Company of Omaha, which held Merrick County's annual bridge contracts between 1910 and 1915. Built from components rolled by the Illinois Steel Company, the Prairie Creek Bridge was fabricated from a standard design of the state engineer's office.

As a typical example of a relatively common structural type, with its construction history largely undocumented, the Prairie Creek Bridge enjoys only marginal historical and technological significance.

NAME(S) OF STRUCTURE
Warm Slough Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006112305; Merrick County Supervisors' Record, located at Merrick County Courthouse, Central City, Nebraska, refer to the following entries in Book 5: 11 January 1910 (page 32), 10 January 1911 (page 81), 9 January 1912 (page 155), 15 January 1913 (page 233), 13 January 1914 (page 297), 9 February 1915 (page 359); field inspection by Clayton Fraser, 27 September 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
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Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Wood River Bridge
NDOR: C006116405

MERR04

DATE(S) OF CONSTRUCTION
ca.1912

LOCATION
county road over the Wood River; S5/8, T11N, R8W
7.1 miles southwest of Chapman; Merrick County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 25)

CONDITION
good

OWNER
Merrick County

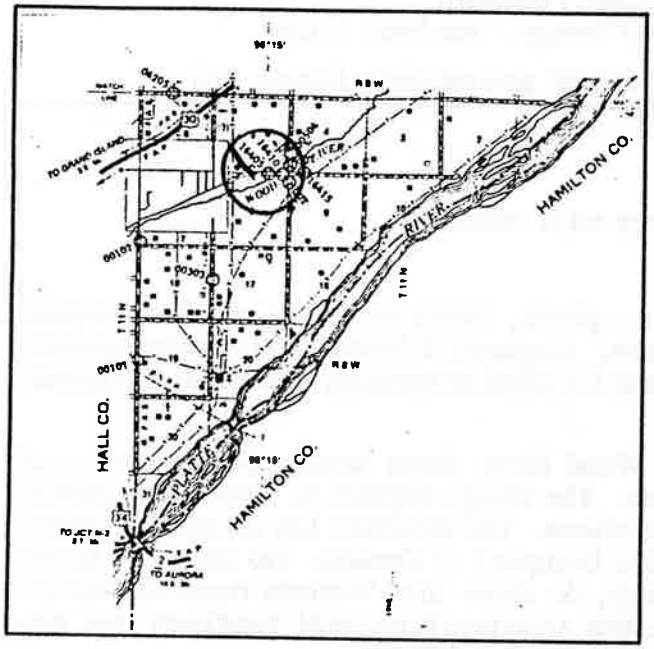
span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt pony truss with outriders
span length:	80.0'	substructure:	concrete abutments and wingwalls
total length:	82.0'	floor/decking:	earth covered timber decking
roadway wdt.:	15.7'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars; vertical: 2 angles with batten plates; diagonal: 2 looped rectangular eyebars; lateral bracing; round bar; floor beam: I-beam U-bolted to vertical; guardrail: 2 channels

This single-span, pinned Pratt pony truss carries a gravel-surfaced county road across the Wood River about seven miles southwest of Chapman. A substructure of concrete abutments and wingwalls provides support for the truss. The bridge appears to possess a relatively high degree of historical integrity, being in good physical condition and having no major alterations. The structure has no builder's plate, but it is identical to another span (MERR01) erected by the Western Bridge and Construction Company of Omaha. No reference to the structure was found in minutes of the Merrick County Supervisors. County records, though, do show that Western received Merrick County's annual bridge building contract each year between 1910 and 1914. Based on this structure's physical condition and pin-connected detailing, it was almost certainly among the bridges built by Western during that time period.

As a typical example of a relatively common structural type, with its construction history largely undocumented, the Wood River Bridge enjoys only marginal historical and technological significance.

NAME(S) OF STRUCTURE
Wood River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006116405; Merrick County Supervisors' Record, located at Merrick County Courthouse, Central City, Nebraska, refer to the following entries in Book 5: 11 January 1910 (page 32), 10 January 1911 (page 81), 9 January 1912 (page 155), 15 January 1913 (page 233), 13 January 1914 (page 297), 9 February 1915 (page 359); field inspection by Clayton Fraser, 27 September 1989.

INVENTORIED BY
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AFFILIATION
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Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Central City State Aid Bridge
NDOR: S014 07891

MERR05

DATE(S) OF CONSTRUCTION
1919

LOCATION
State Highway 14 over the Platte River; S21/22, T13N, R6W
2.6 miles south of Central City; Merrick/Hall County, Nebraska

USE (ORIGINAL / CURRENT)
highway bridge / highway bridge

RATING NRHP eligible (score: 61)

CONDITION
good

OWNER
Nebraska Department of Roads

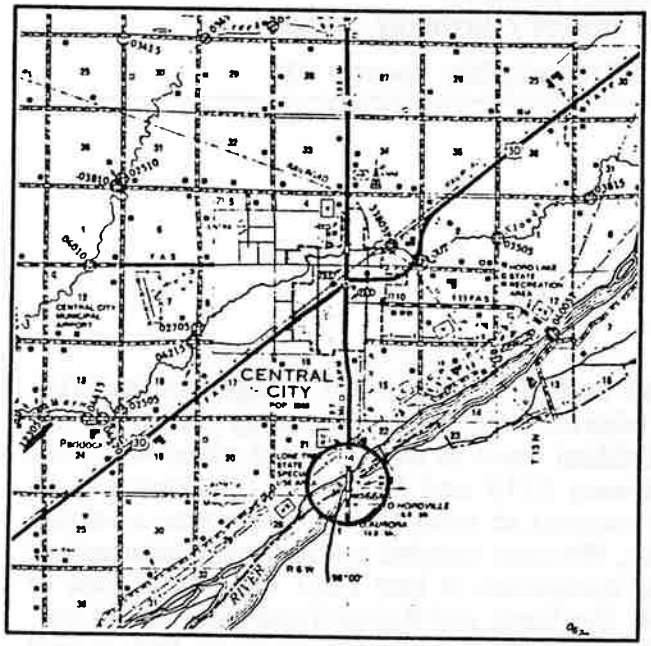
span number:	16	superstructure:	concrete cantilevered filled spandrel arch
span length:	50.0'	substructure:	concrete abutments, wingwalls and piers
total length:	884.0'	floor/decking:	asphalt over concrete decking
roadway wdt.:	22.0'	other features:	guardrail: concrete curb and steel angle

To provide for bridge construction across the state's larger streams, the Nebraska Legislature passed the State Aid Bridge Act in 1911. The program established a fund to aid the erection of bridges measuring at least 175 feet, whereby the state and county shared in the bridge's cost. Plans for such bridges were prepared by the State Engineer's Office on an individual basis as standardized plans were not considered appropriate for large-scale river bridges. Among the State Aid bridges built between 1919 and 1921 was this Platte River crossing located 2-1/2 miles south of Central City. On September 17, 1919, an $83,990.00 contract to erect the structure was awarded to the Western Bridge and Construction Company of Omaha. Working from specialized plans, Western erected a structure comprised of 16 concrete filled spandrel arches with a total overall length of 884 feet. Construction was completed in late 1921 for a total cost of $146,232.48, with the state providing funding for half of the total cost. In 1937, a year after the State Aid Bridge Fund was closed out, the Central City Bridge underwent some major modifications. In that year the bridge's roadway was widened from 16 to 22 feet, a new concrete floor with curbs was installed, and the bridge's approach grades were improved. The structure remains otherwise intact today.

Although altered by the widening of its roadway, the Central City State Aid Bridge is historically and technologically significant as one of the six remaining multiple-span concrete arch structures built under the state aid program in the 1910s and early 1920s.

NAME(S) OF STRUCTURE
Central City State Aid Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number S014 07891; Aivars G. Ronis, "Nebraska State Aid Bridges", typewritten report by the Nebraska Department of Roads, July 1971, revised 1978, n.p.; Department of Public Works, **Thirteenth Biennial Report, 1919-20**", pages 559, 663; Department of Public Works, **Fourteenth Biennial Report**, 1921-22, page 273; Department of Roads and Irrigation, **Twenty-Second Biennial Report**, 1937-38, page 50; field inspection by Clayton Fraser, 27 September 1989.

INVENTORIED BY
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AFFILIATION
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Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Clarks Viaduct [State Highway 92 Overpass] MERR06
NDOR: S092 38092

DATE(S) OF CONSTRUCTION
1940

LOCATION
State Highway 92 over US Hwy 30 / Union Pacific RR; S10/15, T14N, R5W
2.1 miles southwest of Clarks; Merrick County, Nebraska

USE (ORIGINAL / CURRENT)
highway overpass / highway overpass

RATING NRHP non-eligible (score: 38)

CONDITION
excellent

OWNER
Nebraska Department of Roads

span number:	1	superstructure:	steel plate deck girder
span length:	95.0'	substructure:	concrete abutments, wingwalls and spill-through piers
total length:	440.0'	floor/decking:	asphalt covered concrete decking over I-beam stringers
roadway wdt.:	24.0'	other features:	guardrail: concrete with Armco at approaches

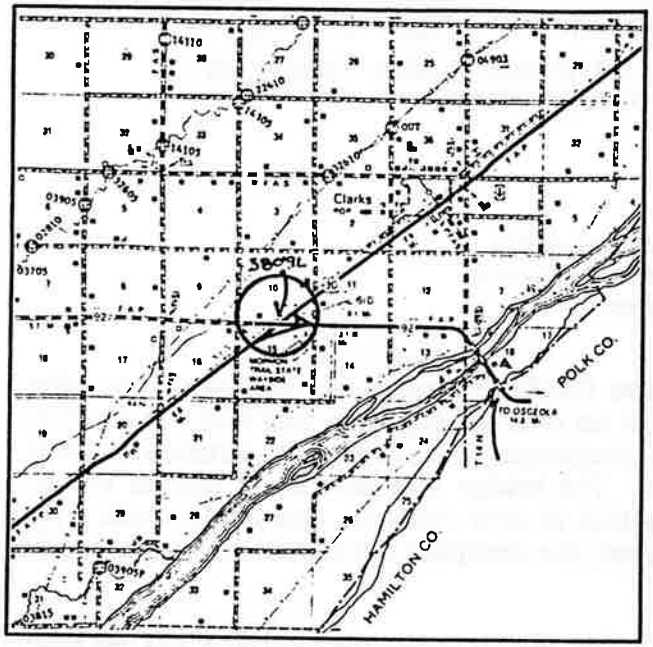
This concrete/steel viaduct carries State Highway 92 over U.S. Highway 30 and the Union Pacific Railroad Tracks about two miles southwest of Clarks. The structure consists of six steel, cantilevered plate girder spans, with an overall length of 440 feet. A concrete deck built over steel stringers is supported by a substructure comprised of concrete piers and abutments with wingwalls. Erected in 1940, the Clarks Viaduct was the only primary system crossing built in Merrick County that year. The bridge was erected as part of project FAGS 81-1, which also included installation of a new section of concrete roadway, construction of new culverts, and grade work. The project's overall cost, including the bridge, was $83,473.96. Since its completion later that year, the overpass has carried vehicular traffic without major alteration.

"One of the outstanding rural structures designed [in the 1939-40 biennium] is the Clarks Viaduct which separates Highway No. 92 from No. 30 and the Union Pacific Railroad," the Nebraska Bureau of Roads and Bridges reported in 1940. With its 95-foot spans, the structure was one of several long-span cantilevered beam designs executed by the bureau of roads in the 1930s and early 1940s. The Clarks Viaduct differed from most of the river crossings built during this period, however, in its use of plate girders instead of rolled I-beams.

NAME(S) OF STRUCTURE

Clarks Viaduct [State Highway 92 Overpass]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number S092 38092; Nebraska Department of Roads and Irrigation, Twenty-Third Biennial Report, pp. 36-37, 61, 154; field inspection by Clayton Fraser, 27 September 1989.

INVENTORIED BY

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AFFILIATION

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Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Clarks State Aid Bridge
NDOR: S092 38367; S092 38387; S092 38425

MERR07

DATE(S) OF CONSTRUCTION
1929-30

LOCATION
State Highway 92 over the Platte River; S18, T14N, R4W
2.3 miles south of Clarks; Merrick County, Nebraska

USE (ORIGINAL / CURRENT)
highway bridge / highway bridge

RATING NRHP non-eligible (score: 35)

CONDITION
excellent

OWNER
Nebraska Department of Roads

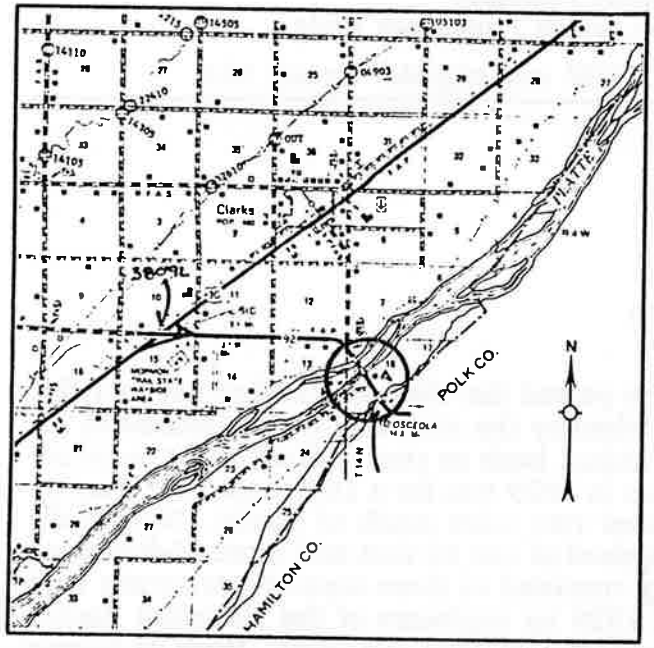
span number:	10; 9; 1	superstructure:	steel stringer
span length:	50.0'	substructure:	concrete abutments, wingwalls and piers
total length:	502';452';51'	floor/decking:	asphalt over concrete decking
roadway wdt.:	40.0'	other features:	guardrail: aluminum tube with concrete curb

To provide for bridge construction across the state's larger streams, the Nebraska Legislature passed the State Aid Bridge Act in 1911. The program established a fund to aid the erection of bridges measuring at least 175 feet, whereby the state and county shared in the bridge's cost. Plans for such bridges were prepared by the state engineer's office on an individual basis as standardized plans were not considered appropriate for large-scale river bridges. One of the largest state-aid appropriations in 1929 was for a 1000-foot-long crossing of the Platte River on State Highway 92 between Merrick and Hamilton Counties a little over two miles south of Clarks. Named the Clarks State Aid Bridge, the new structure would replace a 1915 bridge, which had been comprised of one 60-foot and three 80-foot pony trusses. The Clarks State Aid Bridge was referred to in the singular, but the crossing actually consisted of three separate structures with ten, nine and one spans (north-to-south). The design for the structures was completed in 1929 by engineers of the Nebraska Bureau of Roads and Bridges, and the project let for bids under Project No. 315-A(1)R for either concrete or steel pile piers. With its twenty spans supported by concrete piers and abutments, the Clarks State Aid Bridge as completed in 1930 required 523,740 pounds of superstructural steel, 179,960 pounds of reinforcing steel and 1,288 cubic yards of concrete. In 1972 their 22-foot-wide roadways were widened to 40 feet and their original steel guardrails were replaced with aluminum tubes, but the three structures remain otherwise intact.

Before the state aid bridge program was phased out in 1936, the state engineer's office had designed and built some 77 structures, most of which carried traffic over the larger rivers. Today 16 state-built state aid bridges remain in use, with varying degrees of physical integrity. Of these, the Clarks bridges are perhaps the least noteworthy, technologically. They are historically significant, however, as a regionally important crossing of the Platte River and for their representation of this important state-sponsored construction program.

NAME(S) OF STRUCTURE
Clarks State Aid Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Numbers S092 38367, S092 38387, S092 38425; Department of Public Works, **Eighteenth Biennial Report**, 1929-30, pages 54, 113; Aivars G. Ronis, "Nebraska State Aid Bridges", typewritten report by the Nebraska Department of Roads, July 1971, revised 1978, n.p.; field inspection by Clayton Fraser, 27 September 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Broadwater Bridge
NDOR: S092 07164

MORR01

DATE(S) OF CONSTRUCTION
1924-25

LOCATION
State Highway 92 over the North Platte River; S28/33, T19N, R48W
0.8 mile south of Broadwater; Morrill County, Nebraska

USE (ORIGINAL / CURRENT)
highway bridge / highway bridge

RATING NRHP eligible (score: 68)

CONDITION
good

OWNER
Nebraska Department of Roads

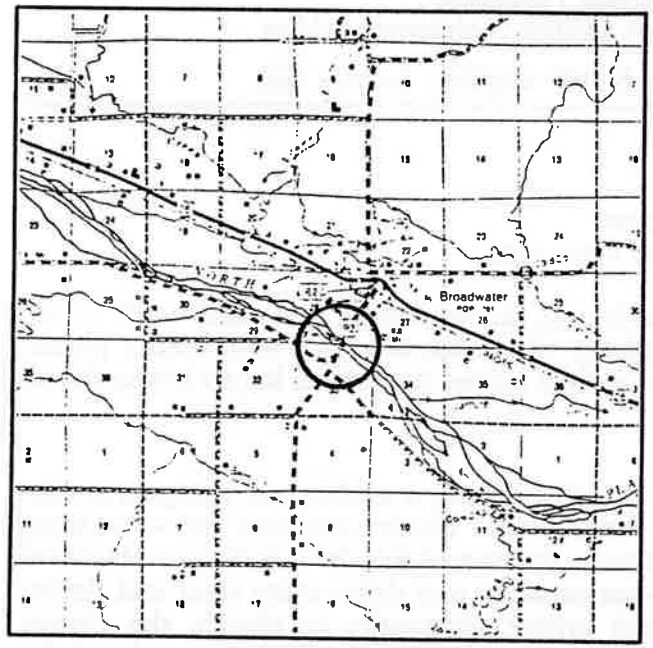
span number:	7	superstructure:	steel, 5-panel, rigid-connected Pratt pony truss
span length:	100.0'	substructure:	concrete abutments, wingwalls and piers on steel piles
total length:	706.0'	floor/decking:	concrete decking over steel I-beam stringers
roadway wdt.:	14.2'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 channels with batten plates; vertical: 4 angles with continuous plate; diagonal: 2 angles with batten plates; lateral bracing: round bar; floor beam: I-beam, field bolted to vertical below lower chord; guardrail: 2 angles

In October 1921 Morrill County applied to the state engineer for State Aid funds to assist in constructing a multi-span bridge over the North Platte River at the small town of Broadwater. When the county was told that state funds would not be available for some time, it instead voted bonds to match federal aid funding for the bridge's construction. The Nebraska Bureau of Roads and Bridges designed a seven-span riveted pony truss for the Broadwater crossing early in 1924, sizing it for a 15-ton capacity and delineating steel and timber piling foundations as two alternatives. After receiving competitive proposals from several bridge companies in March, the county contracted with the Western Bridge and Construction Company of Omaha. Using steel rolled by Inland, Western Bridge completed the truss the following year as Federal Aid Project 79-C, for a total cost of $74,200. The Broadwater Bridge has functioned as a strategic crossing of the Platte River since, in essentially unaltered condition. A parallel replacement structure has been recently completed, and the future of the original trusses is clouded.

The longest-span pony truss developed by the state engineer was 100 feet; through trusses were typically used for longer spans. Numerous 100-foot riveted pony trusses were built across Nebraska in the 1920s, and many remain today, virtually all of which can be attributed to the standardized designs developed by the bureau of roads and bridges. Most are single-span examples and largely undocumented, but four of these structures entail multiple spans. The Broadwater Bridge is one of these. With its seven 100-foot spans, it is configured similar to the Lisco and Lewellen State Aid Bridges (GARD01 and GARD02) in adjacent Garden County, as well as the Platte River Bridge (HALL01) in Hall County, made up of moved spans from the Silver Creek State Aid Bridge. The Broadwater Bridge is historically significant as a regionally important crossing of the North Platte River; it is technologically significant as one of the most noteworthy examples in Nebraska of this relatively common structural type.

NAME(S) OF STRUCTURE
Broadwater Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number S092 07164; Aivars G. Ronis, "Nebraska State Aid Bridges: 1911-1936," typewritten report by Nebraska Department of Roads, 1971, revised 1978, n.p.; Department of Public Works, Fifteenth Biennial Report, 1923-24, pages 153, 156; field inspection by Clayton Fraser, 2 May 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
U.S. Highway 26 Culvert
NDOR: S026 08281

MORR02

DATE(S) OF CONSTRUCTION
1940

LOCATION
U.S. Highway 26 over intermittent stream; S4, T18N, R47W
6.4 miles southeast of Broadwater; Morrill County, Nebraska

USE (ORIGINAL / CURRENT)
highway culvert / highway culvert

RATING determined NRHP non-eligible (score: 25)

CONDITION
excellent

OWNER
Nebraska Department of Roads

span number:	11	superstructure:	reinforced concrete box culvert
span length:	8.0'	substructure:	concrete abutments, wingwalls and piers
total length:	100.0'	floor/decking:	asphalt decking over concrete floor
roadway wdt.:	27.0'	other features:	plainly formed wingwalls, sidewalls and bull-nosed piers; steel guardrails

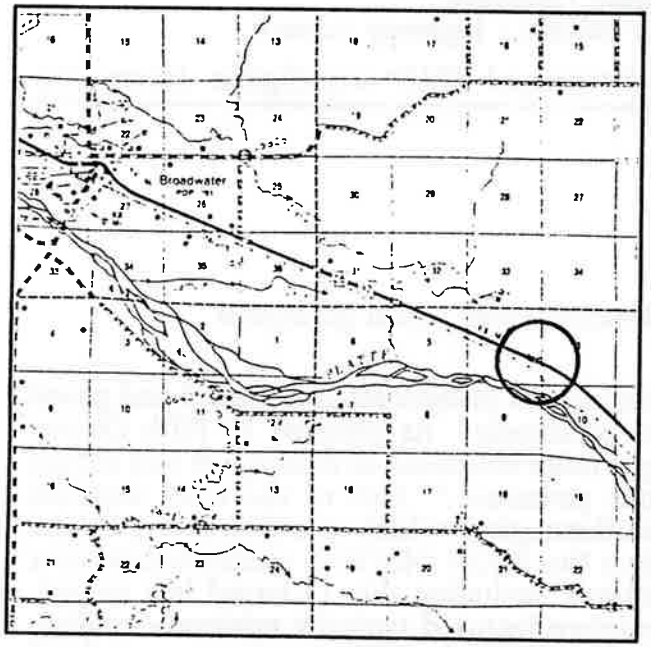
As part of an extensive highway improvement program in 1939-40, the Nebraska Bureau of Roads and Bridges rebuilt, graded and paved U.S. Highway 26 over its entire length along the North Platte River in Nebraska's western panhandle. As reported by Fifth District Engineer T.C. Middleswart, "almost all of [Highway] No. 26 between Ogallala and a point eight miles southeast of Bridgeport was rebuilt or placed under contract for new grading and structures and about 40 miles of bituminous pavement." Part of the work involved rerouting the road through Ash Hollow north of Ogallala to avoid Kingsley Reservoir (Lake McConaughy), which was then filling behind Kingsley Dam. Construction on the segment of highway between Broadwater and Lisco (Project No. FAGH 443(1)-2, contracted October 15, 1940, to Liggett and Knapp, Lincoln, Nebraska) entailed construction of drainage structures, including this 11-barrel box culvert. Consuming 422 cubic yards of concrete and over 47,000 pounds of reinforcing steel, the structure featured typically minimal detailing, with plainly formed wingwalls, sidewalls and bull-nosed piers and a thick overburden of earth fill to carry the roadway. It was completed with the adjacent highway in 1940 and has carried traffic, unaltered, since. The culvert is currently scheduled to be widened.

Engineered by the bureau of roads and bridges, this structure typified culvert design in Nebraska. In the late 1930s, the department was refining its standard designs for reinforced concrete culverts, a process it continued until World War II. "During this biennium [1939-40] more attention has been given than heretofore to the physical effect of soils on drainage structures," the bureau reported in 1940. In that two-year period, the bureau built 235 such small-scale drainage structures, most of which featured one to three barrels. But the bureau experimented with longer culverts as well: two with eight barrels, one with nine, and this eleven-barrel structure on U.S. 26. Although the U.S. 26 Culvert was the longest box culvert in Nebraska at the time of its completion, it is in reality a technologically marginal structure. It is distinguished from the thousands of shorter culvert in the state only by its multiplicity of spans. As a relatively minor component of a highway reconstruction that occurred barely fifty years ago, the U.S. Highway 26 Culvert displays no exceptional historical significance.

NAME(S) OF STRUCTURE

U.S. Highway 26 Culvert

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number S026 08281; Nebraksa Department of Roads and Irrigation, Twenty-Third Biennial Report of the Department of Roads and Irrigation, 1939-40, page 40; Nebraksa Department of Roads and Irrigation, Twenty-fourth Biennial Report of the Department of Roads and Irrigation, 1941-42, page 60; field inspection by Clayton Fraser, 2 May 1989.

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Brock Bridge
NDOR: C006401105P

NEMA01

DATE(S) OF CONSTRUCTION
ca.1920

LOCATION
county highway over Little Nemaha River; S16, T6N, R13E
north side of Brock; Nemaha County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 20)

CONDITION
good

OWNER
Nemaha County

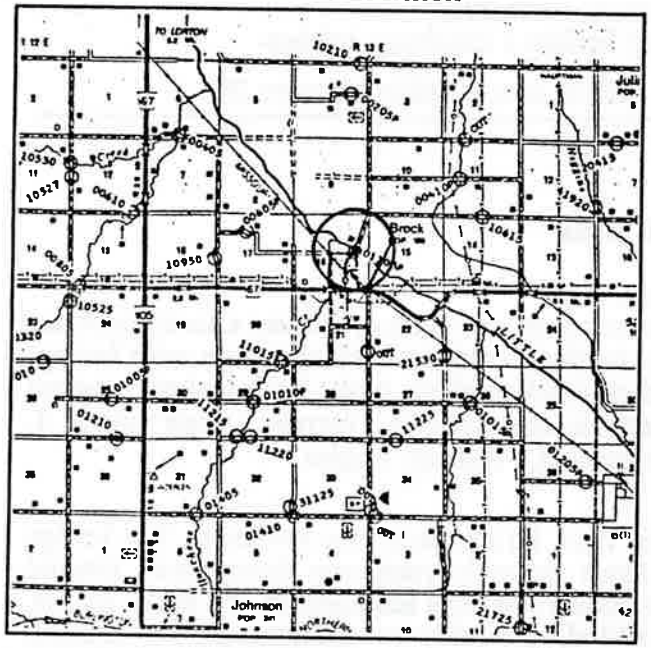
span number:	1	superstructure:	steel, 7-panel, rigid-connected Pratt through truss
span length:	120.0'	substructure:	steel pile bent abutments and piers
total length:	289.0'	floor/decking:	double layer wood deck over I-beam stringers
roadway wdt.:	15.2'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: back-to-back channels with top and bottom battens; vertical: back-to-back channels with lacing; diagonal: 2 angles with battens; portal: back-to-back angles; strut: back-to-back angles; top and bottom lateral bracing: cross-braced circular-section eyerods; floor beam: I-beam riveted to angles which are bolted to gussets; railing: angles

The Brock Bridge carries a county highway over the Little Nemaha River and is located in S16, T6N, R13E, Lafayette Precinct. The bridge consists of (from north to south): two timber stringer approaches, one seven-panel, riveted Pratt through truss, one three-panel, riveted Pratt pony truss, and two timber stringer approach spans. According to a local resident, the main truss was installed in the early 1920s, when the river channel was straightened. In 1947, the pony truss approach span was added, probably to compensate for erosion widening the river. The county began to adopt state bridge plans as early as 1912, so this bridge was probably also state designed. Unfortunately, county records do not make specific mention of this bridge, and its construction history is unknown.

The trusses in this structure appear to be typical of many other pony and through trusses in Nebraska.

NAME(S) OF STRUCTURE
Brock Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006401105P; Proceedings of the Nemaha County Commissioners, 1892-1927, located in the Nemaha County Courthouse, Auburn, Nebraska; Jeffrey A. Hess, interview with Boyd Wakelin, 18 July 1989; field inspection by Jeffrey A. Hess, 18 July 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C006401210

NEMA02

DATE(S) OF CONSTRUCTION
ca.1920

LOCATION
county road over stream; S25/36, T6N, R12E
1.5 miles south, 3 miles west of Brock; Nemaha County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 17)

CONDITION
good

OWNER
Nemaha County

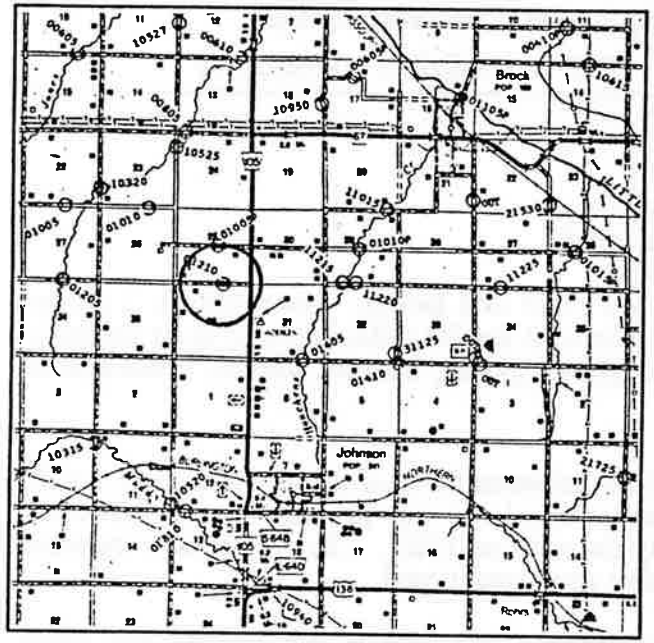
span number:	1	superstructure:	steel, 6-panel, rigid-connected Warren pony truss
span length:	50.0'	substructure:	steel H-pile bent abutments with timber backwalls
total length:	51.0'	floor/decking:	double-layer timber deck over I-beam stringers
roadway wdt.:	16.5'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: 2 angles with battens; vertical: built-up I-beam; diagonal: 2 angles with battens; floor beam: I-beam riveted to angles which are bolted to gusset plates; bottom lateral: cross-braced angles; railing: angles

This small-scale pony truss carries a county road over a small stream and is located on the line between Section 25 and 36, T6N, R12E, Lafayette Precinct. The bridge is a single-span, riveted Warren on H-pile abutments. County records do not provide any construction information, but based on the bridge's riveted construction and 16-foot roadway, it probably dates to ca.1920. The bridge is somewhat unusual in that Warren trusses were not typically built in Nebraska, the Pratt truss being the preferred typed.

Although Warren trusses were seldom built in Nebraska and few remain today, this single-span example is not among the more distinguished survivors.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006401210; Proceedings of the Nemaha County Commissioners, 1892-1927, located in the Nemaha County Courthouse, Auburn, Nebraska; field inspection by Jeffrey A. Hess, 18 July 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
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DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C006401305

NEMA03

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over stream; S9/10, T4N, R13E
2.5 miles east, 5.4 miles south of Johnson; Nemaha County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 18)

CONDITION
good

OWNER
Nemaha County

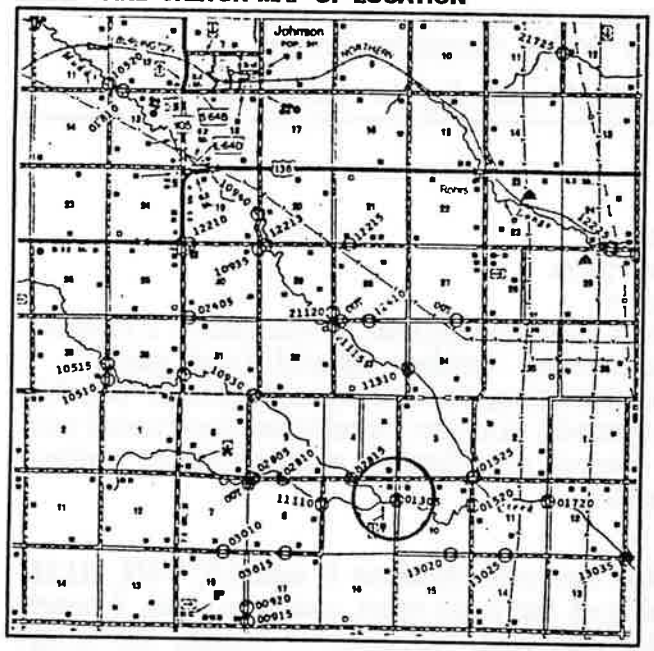
span number:	1	superstructure:	steel, 4-panel, pinned Pratt half-hip pony truss
span length:	60.0'	substructure:	abutments buried; truss is on steel pile bent piers
total length:	100.0'	floor/decking:	double-layer wood deck over I-beam stringers
roadway wdt.:	16.0'	other features:	upper chord: back-to-back channels with cover plate and battens; lower chord: 2 circular-section looped eyerods with one circular-section, welded, eyerod (end panels), 2 rectangular-section eyebars with one circular-section, welded eyerod (center panels); vertical: I-beam; diagonal: 2 square-section eyerods; counter: circular-section eyerod with turnbuckles; floor beam: I-beam; bottom lateral: cross-braced angle-sections; railing: angle-section rails and posts on north approach

Bridge Number C006401305 carries a county road over a stream and is located on the line between Sections 9 and 10, T4N, R13E, Benton Precinct. The bridge consists of three spans: 2 steel stringer approaches to either side of the main span, and one steel, 4-panel, pin-connected, half-hip Pratt pony truss. Although county records do not provide a construction date, based on its design, the bridge was probably built ca.1910. In 1913, the county adopted state plans, which precluded the use of non-standardized half-hip Pratt trusses. It is unlikely that the bridge was built much earlier than 1910, as it would then probably have a roadway narrower than 16-feet. At some time, welded eyerods were added to reinforce the bridge's lower chord, and the floor beams and U-bolts were welded to the superstructure. Apparently at the same time, the original verticals were replaced by I-beams. Due to these alterations, the bridge has poor integrity.

This structure is typical of many half-hip Pratt pony trusses built in Nebraska. Due to alterations, the bridge lacks integrity and is not eligible for nomination to the National Register.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006401305; Nemaha County Commissioners Records, 1892-1927, located in Nemaha County Courthouse, Auburn, Nebraska; field inspection by Jeffrey A. Hess, 18 July 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
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DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Hughes Creek Bridge
NDOR: C006402703

NEMA04

DATE(S) OF CONSTRUCTION
ca.1900

LOCATION
county road over Hughes Creek; S10/11, T4N, R14E
Howe; Nemaha County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 18)

CONDITION
fair

OWNER
Nemaha County

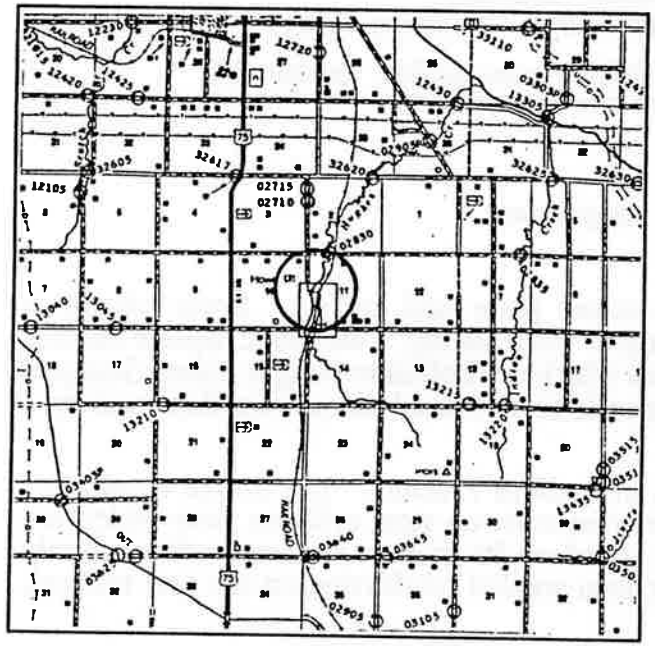
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt half-hip pony truss
span length:	40.0'	substructure:	timber pile abutments, steel cylinder piers
total length:	70.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	14.0'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: 2 rectangular-section eyebars; vertical: 4 angles with lacing; diagonal: square-section eyerods; floor beam: I-beam riveted to angles which are bolted to hanger plates (hangers riveted to bottoms of verticals); bottom lateral: cross-braced circular-section eyerods

This short-span pony truss carries a county road over Hughes Creek in the town of Howe, in Bedford Precinct. The bridge consists of a steel, pinned Pratt half-hip pony truss with timber stringer approaches on both ends. The truss rests on steel cylinder piers which are probably original to the structure. County records do not provide a construction date, but based on its narrow roadway width of only 14-feet, its half-hip design and timber stringers, the bridge probably dates to ca.1900. Aside from welded reinforcing on the east vertical, south web, the bridge appears to be unaltered and has good integrity.

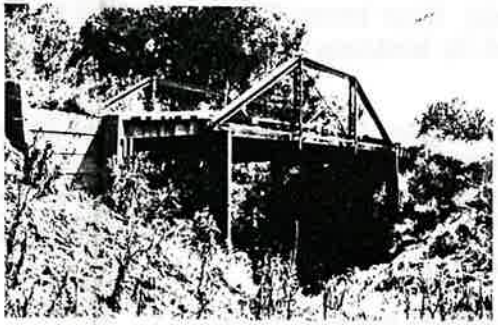
This structure is typical of many half-hip Pratt pony trusses built in Nebraska.

NAME(S) OF STRUCTURE
Hughes Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006402703; Proceedings of the Nemaha County Commissioners, 1892-1927, located in Nemaha County Courthouse, Auburn, Nebraska; field inspection by Jeffrey A. Hess, 18 July 1990.

INVENTORIED BY
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DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C006402805

NEMA05

DATE(S) OF CONSTRUCTION
ca.1925

LOCATION
county road over stream; S5/8, T4N, R13E
5 miles south, 0.5 miles east of Johnson; Nemaha County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 19)

CONDITION
good

OWNER
Nemaha County

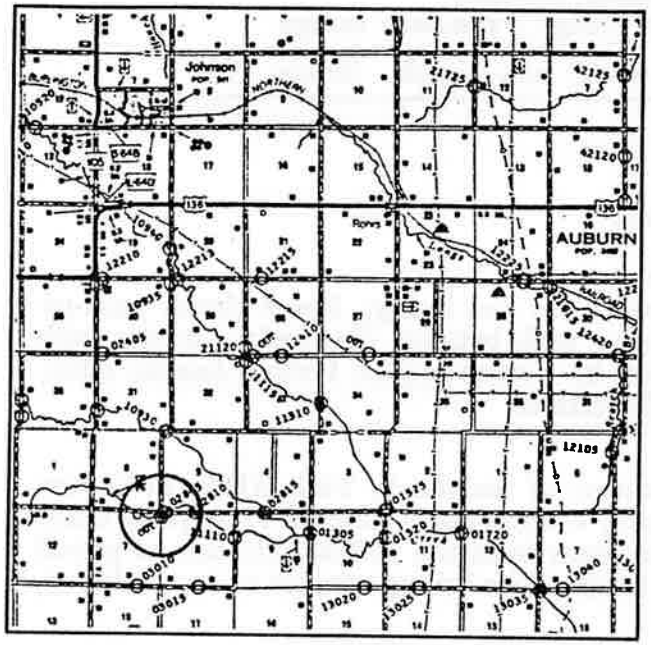
span number:	1	superstructure:	steel, 3-panel, rigid-connected Pratt pony truss
span length:	50.0'	substructure:	steel H-pile bent abutments and piers
total length:	91.0'	floor/decking:	double layer wood deck over I-beam stringers
roadway wdt.:	15.7'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: back-to-back channels with battens; vertical: 4 angles with battens; diagonal: 2 angles with battens; floor beam: I-beam bolted to gussets by riveted angles; bottom lateral: cross-braced circular-section eyerod; railing: angle-sections

Bridge Number C006402805 carries a county road over a small stream in the northwest corner of Section 8, T4N, R13E, in Benton Precinct. The bridge consists of two steel stringer approaches on either end of the main span, a three-panel, riveted Pratt pony truss. County records do not provide a construction date, but the bridge's design is similar to state plans from the 1920s. The use of paired channel sections in the lower chord, rather than angle sections, is particularly typical of the 1920s. The bridge appears to be unaltered, and has good integrity.

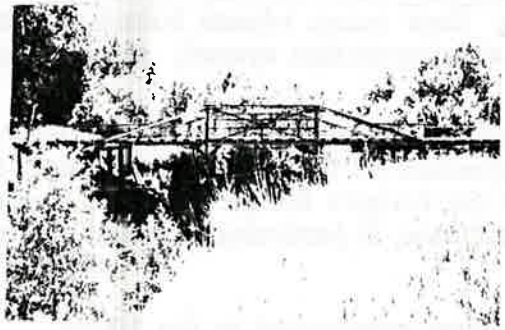
This structure is typical of many state designed pony trusses constructed in the 1920s.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006402805; State of Nebraska, "Standard 15-Ton Bridge Plan, 3 Panel-35 Foot Span..." revised January 1923, plan number 1526, located in Bridge Division, Nebraska Department of Roads; Proceedings of the Nemaha County Commissioners, 1892-1927, located in Nemaha County Court House, Auburn, Nebraska; field inspection by Jeffrey A. Hess, 18 July 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C006402810

NEMA06

DATE(S) OF CONSTRUCTION
ca.1925

LOCATION
county road over stream; S5/8, T4N, R13E
5 miles south and 1 mile east of Johnson; Nemaha County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 16)

CONDITION
fair

OWNER
Nemaha County

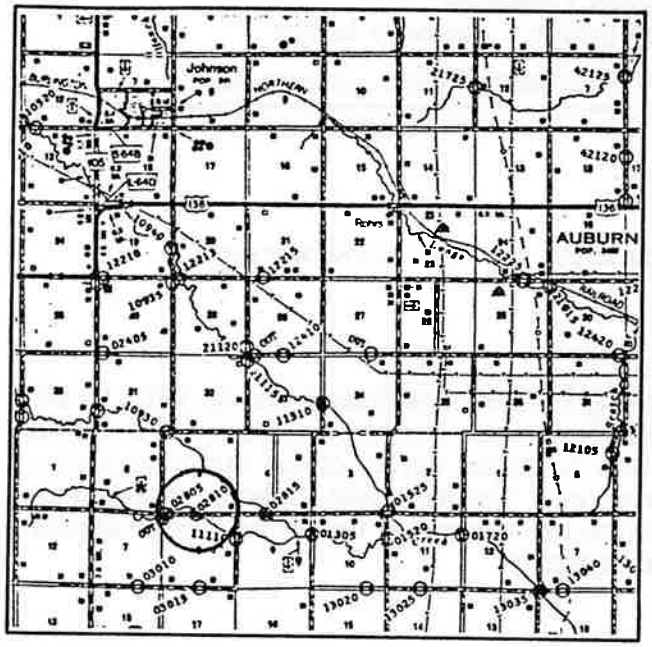
span number:	1	superstructure:	steel, transverse joist through girder
span length:	44.0'	substructure:	coursed, rubble limestone abutments with concrete sills and wood wingwalls
total length:	46.0'	floor/decking:	concrete deck over transverse I-beam joists
roadway wdt.:	21.2'	other features:	no guardrail

Bridge Number C006402810 carries a county road over a small stream and is located on the line between Sections 5 and 8, T4N, R13E, Benton Precinct. The bridge is a single-span transverse joist through girder. The bridge's relatively wide roadway indicates that it was probably built in the 1920s, at which time the county was relying on state bridge plans. Robert Z. Drake, owner of the Standard Bridge Company of Omaha, reportedly developed the transverse joist girder early in the twentieth century. The Nebraska highway department adopted the bridge type as early as 1917, and used it extensively throughout the 1920s. Although the abutments under this bridge appear to have been rebuilt several times, the superstructure appears to be unaltered and has good integrity.

This bridge is a typical example of a 1920s transverse joist girder bridge.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Apppraisal: Structure Number C006402810; Ted Johnson, "A Discussion of the Transverse Joist Girder Bridge," **Nebraska Blue Print**, 26 (March 1927), 12-13; Sara Mullin Baldwin and Robert Baldwin, eds., **Nebraskana** (Hebron, Nebraska: The Baldwin Publishing Company, 1932), pp. 343-344; Proceedings of the Nemaha County Commissioners, 1892-1927, located in Nemaha County Courthouse, Auburn, Nebraska; field inspection by Jeffrey A. Hess, 18 July 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
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DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C006402815

NEMA07

DATE(S) OF CONSTRUCTION
ca.1925

LOCATION
county road over stream; S4/9, T4N, R13E
5 miles south, 1.5 miles east of Johnson; Nemaha County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 20)

CONDITION
good

OWNER
Nemaha County

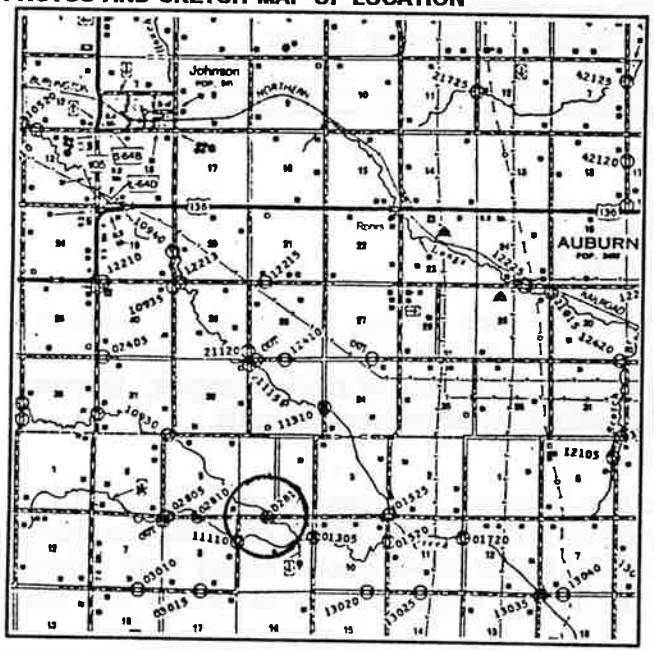
span number:	1	superstructure:	steel, 3-panel, rigid-connected Pratt pony truss
span length:	60.0'	substructure:	steel pile bent abutments with timber back- and wingwalls
total length:	61.0'	floor/decking:	wood deck over I-beam stringers
roadway wdt.:	17.7'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: back-to-back channels with battens; vertical: 4 angles with battens; diagonal: 2 angles with battens; floor beam: I-beam riveted to large gussets by means of riveted angles; bottom lateral: cross-braced circular-section eyerods; railing: channel-section rails

Bridge Number C006402815 carries a county road over a small stream and is located on the line between Sections 4 and 9, T4N, R13E, Benton Precinct. The bridge is a single-span, three-panel, riveted Pratt pony truss. County records do not provide a construction date, but the bridge's design is similar to state plans from the 1920s. The use of paired channel sections in the lower chord, rather than paired angles, is particularly typical of the relatively heavy construction used during the 1920s. The bridge appears to be unaltered and has good integrity.

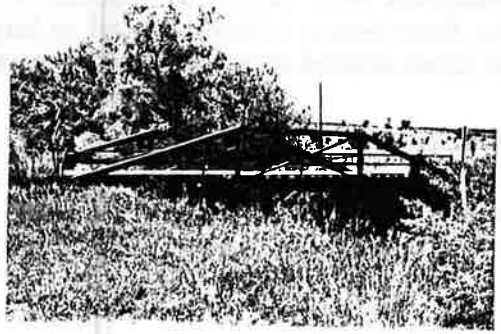
This structure is a typical example of 1920s state designed pony trusses.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006402815; State of Nebraska, "Standard 15-Ton Bridge Plan, 3 Panel, 35 Foot Span..." revised January 1925, Plan Number 1526, located in Bridge Division, Nebraska Department of Roads; Proceedings of the Nemaha County Commissioners, 1892-1927, Auburn, Nebraska; field inspection by Jeffrey A. Hess, 18 July 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
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Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Muddy Creek Bridge
NDOR: C006403403P

NEMA08

DATE(S) OF CONSTRUCTION
ca.1920

LOCATION
county road over Muddy Creek; S30, T4N, R14E
6.3 miles south, 2.4 miles west of Auburn; Nemaha County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 20)

CONDITION
good

OWNER
Nemaha County

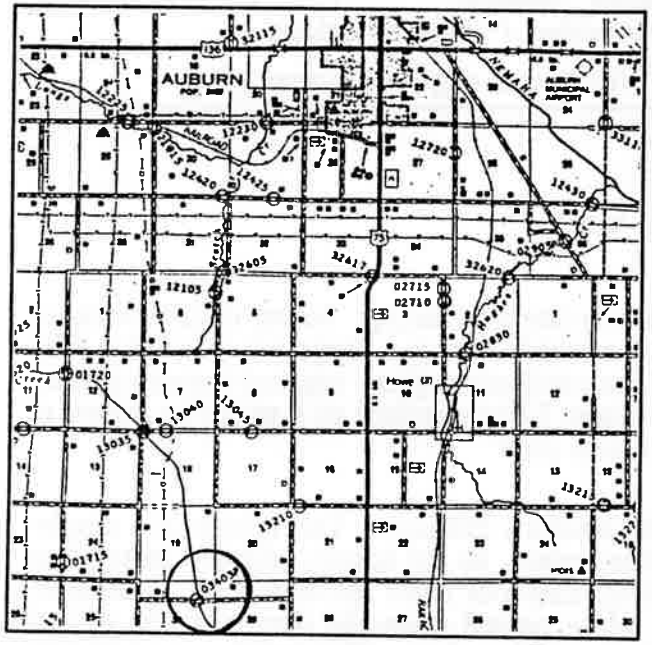
span number:	1	superstructure:	steel, 7-panel, rigid-connected Pratt through truss
span length:	120.0'	substructure:	steel pile bent abutments
total length:	121.0'	floor/decking:	wood deck over timber stringers
roadway wdt.:	15.7'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: back-to-back channels with battens; vertical: 4 angles with lacing; diagonal: 2 angles with battens; portals: back-to-back angles; strut: back-to-back angles; top and bottom lateral: cross-braced circular-section eyerods; floor beam: I-beam bolted to gussets by means of riveted angles; railing: channel-section posts and rails

This medium-span truss carries a county road over Muddy Creek in Section 30, T4N, R14E, Bedford Precinct. The bridge is a single-span, seven-panel, bolted Pratt through truss. The bridge is probably based on state standardized plans, as the county adopted state plans as early as 1913. In fact, the structure is similar to a 1918 state plan for a seven-panel, riveted, 120-foot Pratt through truss. However, the 1918 plan specifies that the lower chord is to be composed of paired angle sections, while paired channels were used in Bridge Number C00640340P. Such heavier construction is typical of the 1920s, indicating a ca.1920 erection date. The structure appears to be unaltered and has good integrity.

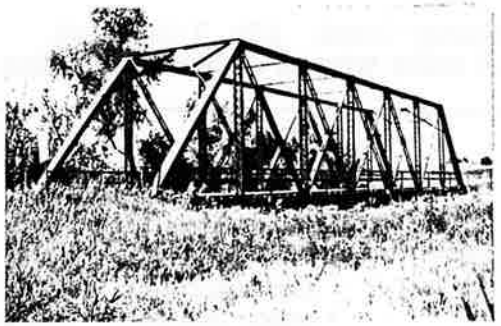
This structure is typical of through-truss construction in Nebraska during the 1910s and 1920s.

NAME(S) OF STRUCTURE
Muddy Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006403403P; State of Nebraska, "Standard Bridge Plan, 120 Foot Span, 7 Panel High Truss," 27 April 1918, plan number 379, located in Bridge Division, Nebraska Department of Roads; Proceedings of the Nemaha County Commissioners, 1892-1927, located in Nemaha County Courthouse, Auburn, Nebraska; field inspection by Jeffrey A. Hess, 18 July 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Culvert
NDOR: C006403640

NEMA09

DATE(S) OF CONSTRUCTION
ca.1933-1942

LOCATION
county road over stream; S26/35, T4N, R14E
7 miles south, 0.2 miles east of Auburn; Nemaha County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 31)

CONDITION
good

OWNER
Nemaha County

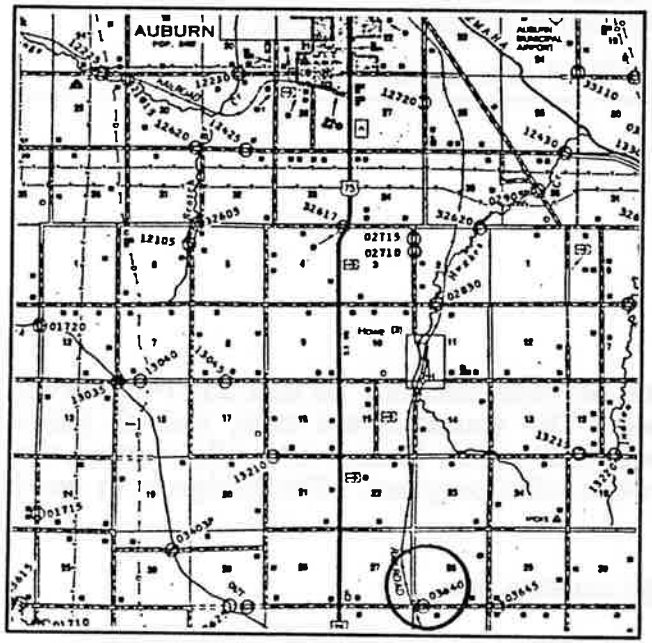
span number:	2	superstructure:	stone, filled spandrel arch culvert
span length:	10.0'	substructure:	stone abutments and pier
total length:	22.0'	floor/decking:	gravel over earth fill
roadway wdt.:	unknown'	other features:	no guardrail

This two-barrel culvert carries a county road over a small stream and is located on the line between Sections 26 and 35, T4N, R14E, Bedford Precinct. The bridge is a stone arch culvert built of coursed, dressed limestone. The voussoirs are even, and all joints approximately 1-1/2" wide. The bridge is nearly identical to a three-barrel stone arch culvert (NEMA18), located 1/4 mile west on the same road. Both bridges appear to have been constructed as part of a Depression Era work-relief program. The bridge is in good condition and has good integrity.

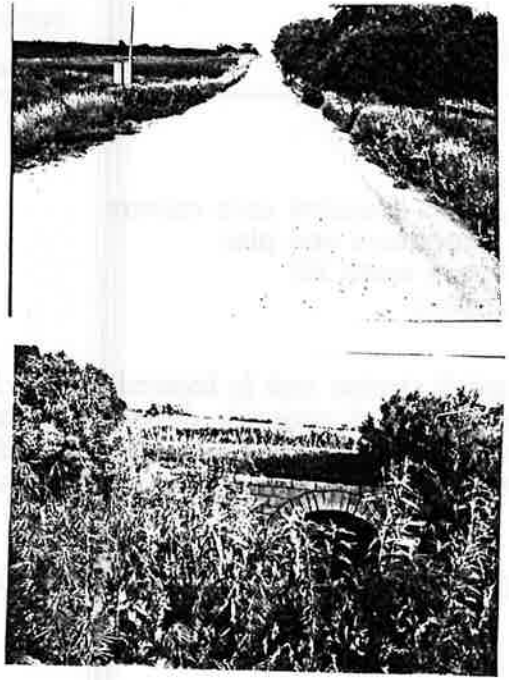
The bridge is a typically designed and detailed example of Depression-Era stone-arch bridge construction.

NAME(S) OF STRUCTURE
Culvert

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006403640; field inspection by Jeffrey A. Hess, 17 July 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C006410320

NEMA10

DATE(S) OF CONSTRUCTION
ca.1935

LOCATION
county road over stream; S22/23, T6N, R12E
4.5 miles west, 0.7 miles south of Brock; Nemaha County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 19)

CONDITION
good

OWNER
Nemaha County

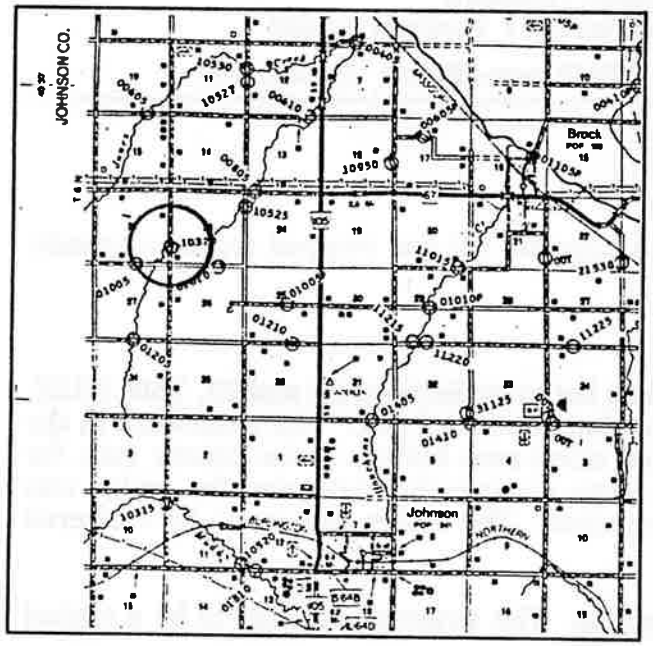
span number:	2	superstructure:	steel stringer
span length:	32.0'	substructure:	battered limestone abutments and pier, with concrete sill and stepped stone wingwalls
total length:	63.0'	floor/decking:	concrete deck
roadway wdt.:	26.0'	other features:	steel angle guardrails

Bridge Number C006410320 carries a county road over a small stream and is located on the line between Sections 22 and 23, T6N, R12E, Lafayette Precinct. The bridge is a two-span, steel stringer set on battered, ashlar, limestone abutments and pier. The stonework in the substructure is of high quality, and appears to be identical to that in several WPA-constructed stone arch bridges in the county (see, for example, Bridge Number C006403640). The relatively wide 26-foot roadway also suggests a late construction date, and the bridge was probably built around 1935. Unfortunately, county records do not provide any specific information. The bridge appears to be unaltered and in good condition.

The bridge appears to be a typical steel stringer span, but is noteworthy for its stone abutments. The structure appears to be a typical example of Depression-Era bridge construction.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006410320; field inspection by Jeffrey A. Hess, 18 July 1989.

INVENTORIED BY
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AFFILIATION
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DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Honey Creek Bridge
NDOR: C006411250

NEMA11

DATE(S) OF CONSTRUCTION
ca.1900

LOCATION
county road over Honey Creek; S25/36, T6N, R15E
1.4 miles south, 2.3 miles east of Peru; Nemaha County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 45)

CONDITION
fair

OWNER
Nemaha County

span number:	1	superstructure:	steel, 6-panel, pin-connected Warren through truss
span length:	90.0'	substructure:	H-pile bent abutments with timber back and wingwalls
total length:	91.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	13.6'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 rectangular-section eyebars; diagonal: 2 rectangular-section eyebars (U_1-L_2, U_3-L_4, both ends), 2 channels with cover plate and bottom channel section (L_2-U_3, L_4-U_5, both ends), I-beam (center diagonal); counter: circular-section eyerods with turnbuckles (L_2-U_5, both ends); portal: I-beam; strut: I-beam; lateral: cross-braced circular-section eyerod; floor beam: I-beams U-bolted; railing: channel-section posts and rails

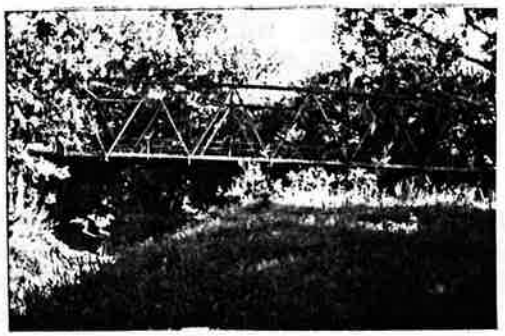
This small-scale truss carries a county road across Honey Creek near the small town of Peru. Consisting of a single-span, pinned Warren through truss, the bridge features two diagonal counters in each web that run from the upper center panel points to the first lower panel points from each end of the truss. The diagonals also vary greatly in their composition, the center members being circular eyebars, while the rest are either paired eyebars or paired channel sections tied by cover plates and additional channel sections. The channel-section web also becomes progressively shallower, ranging from 6-inches in the end posts, to 3-inches in the second panel. Nemaha County assigns the bridge a construction date of 1900, which is consistent with the truss's unusual design and narrow roadway. County records do not indicate that a bridge was built over Honey Creek in 1900, although in 1905 the county commissioners ordered a bridge in this location repaired. A local resident reports that a flood washed away the original Honey Creek Bridge in 1929, and that the current span was moved in from another location at that time. An H-beam is bolted to the southeast endpost as reinforcement, and the lower section of the endpost is splice welded, alterations made in the 1980s. Aside from new abutments, no other changes appear to have been made to the bridge.

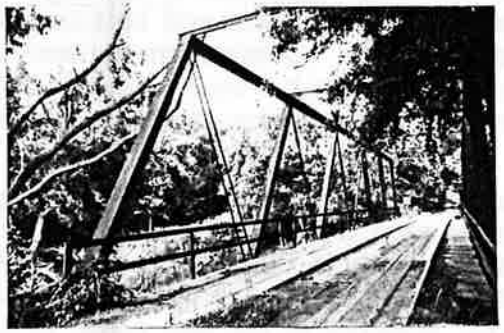
Although the Warren truss configuration was first patented in 1848, it did not received widespread acceptance as a vehicular truss type until the development of rigid-connected technology after the turn of the century. Pin-connected Warren trusses are, therefore, rare, and those with two-panel diagonals are rarer, still. The Honey Creek Bridge is the only example of this esoteric bridge type identified in the statewide bridge inventory.

NAME(S) OF STRUCTURE
Honey Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION

LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006411250; Proceedings of the Nemaha County Commissioners, 1892-19227, located in Nemaha County Courthouse, Auburn, Nebraska, see following entry: 16 May 1905, Volume 5, p. 57; Jeffrey A. Hess, interview with John Stevenson, Nemaha County Highway Superintendent, 17 July 1989; Jeffrey A. Hess, interview with Clarence Pebley, 19 July 1989; field inspection by Jeffrey A. Hess, 19 July 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
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DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Muddy Creek Bridge
NDOR: C006411310

NEMA12

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over Muddy Creek; S33/34, T5N, R13E
2.5 miles east, 3.7 miles south of Johnson; Nemaha County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 20)

CONDITION
fair

OWNER
Nemaha County

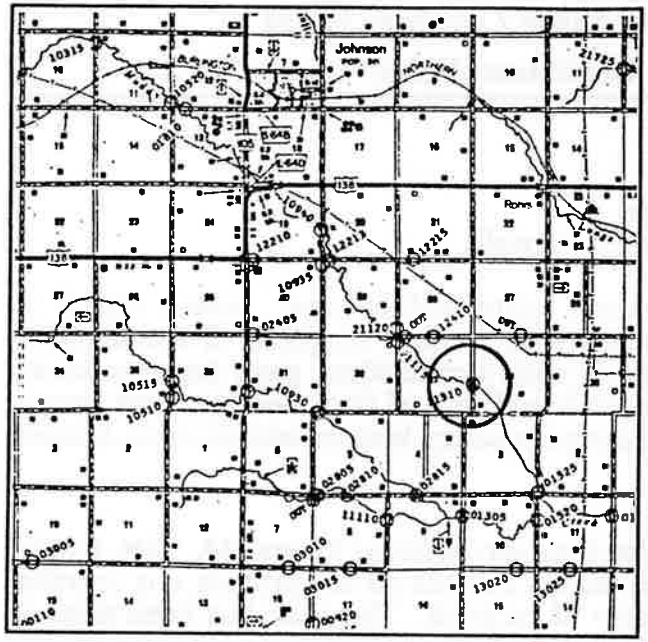
span number:	1	superstructure:	steel, 5-panel, pin-connected Pratt pony truss
span length:	90.0'	substructure:	H-pile bent abutments with timber back- and wingwalls
total length:	90.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	12.0'	other features:	upper chord: back-to-back channels with cover plate and battens; lower chord: 2 rectangular-section eyebars; vertical: 4 angles with lacing; diagonal: 2 rectangular-section eyebars; counter: square-section eyerods with turnbuckles; sway bracing: back-to-back angles knee braced to bottoms of verticals and tops of floor beams; floor beam: I-beam bolted by means of riveted angles to hanger plates; bottom lateral: cross-braced circular-section eyerod; railing: lattice

Bridge Number C006411310 carries a county road over Muddy Creek and is located on the line between Sections 33 and 34, T5N, R13E, Washington Precinct. The bridge is a single-span pin-connected, Pratt pony truss. Although county records do not provide any specific information, the bridge's 12-foot roadway and pinned construction suggest a construction date of ca.1910. The truss has been altered by the addition of welded bracing along the west web.

This structure appears to be typical of many small pony trusses built in Nebraska.

NAME(S) OF STRUCTURE
Muddy Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006411310; Proceedings of the Nemaha County Commissioners, 1892-1927, located in Nemaha County Courthouse, Auburn, Nebraska; field inspection by Jeffrey A. Hess, 18 July 1989.

INVENTORIED BY
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DATE
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HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Muddy Creek Bridge
NDOR: C006413035

NEMA13

DATE(S) OF CONSTRUCTION
ca.1935

LOCATION
county road over Muddy Creek; S12/13, T4N, R13E
4 miles south, 3 miles west of Auburn; Nemaha County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 22)

CONDITION
good

OWNER
Nemaha County

span number: 1
span length: 100.0'
total length: 131.0'
roadway wdt.: 19.5'

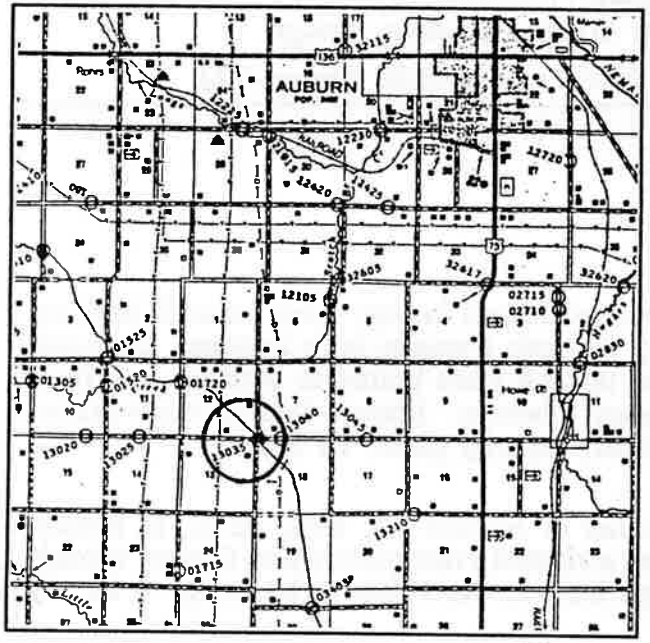
superstructure: steel, 5-panel, rigid-connected Pratt pony truss
substructure: steel pile bent abutments and pier
floor/decking: timber deck over timber stringers
other features: upper chord: back-to-back channels with cover plate and lacing; lower chord: back-to-back channels with top and bottom battens; vertical: 4 angles with battens; diagonal: 2 angles with battens; bracing: knee braced by web plate bolted to verticals and floor beam by means of riveted angles; floor beam: I-beams; bottom lateral: cross-braced circular-section eyerods; railing: angle-sections; capacity plate: **16 Tons**

Bridge Number C006413035 carries a county road over Muddy Creek in the northeast corner of Section 13, T4N, R13E, in Benton Precinct. The bridge consists of a steel stringer approach on the south, and the channel span, a riveted Pratt pony truss. County records do not provide a construction date, but the bridge's design is typical of state-planned bridges built in the 1930s. The bridge is largely unaltered and has good integrity.

This structure is typical of 1930s state designed riveted pony trusses.

NAME(S) OF STRUCTURE
Muddy Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006413035; field inspection by Jeffrey A. Hess, 18 July 1989.

INVENTORIED BY
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AFFILIATION
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DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Little Nemaha River Bridge NEMA14
NDOR: C006413305

DATE(S) OF CONSTRUCTION
ca.1920

LOCATION
county road over Little Nemaha River; S31/32, T5N, R15E
2.2 miles south, 5 miles west of Brownville; Nemaha County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 16)

CONDITION
good

OWNER
Nemaha County

span number:	1	superstructure:	steel, 7-panel, rigid-connected Pratt through truss
span length:	120.0'	substructure:	H-pile abutments and piers
total length:	152.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.2'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: 2 angles with battens; vertical: 4 angles with lacing; diagonal: 2 angles with battens; portal: back-to-back angles; strut: back-to-back angles; top lateral: cross-braced circular-section eyerods; floor beam: I-beam, bolted to gussets by means of riveted angles; railing: angle sections

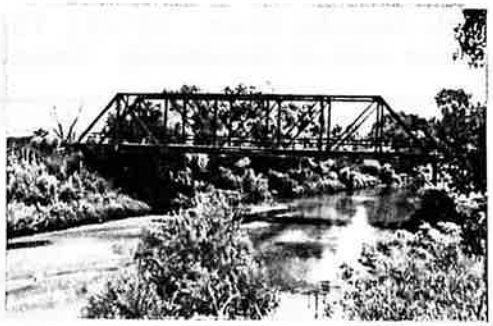
This medium-span truss carries a county road over the Little Nemaha River and is located on the line between Sections 31 and 32, T5N, R15E, London Precinct. The bridge is composed of a steel stringer approach on the south and a bolted Pratt through truss over the river's main channel. The truss appears to be based on state standardized plans, and probably dates to around 1920. Due to extensive welding to reinforce the verticals, the bridge has poor integrity.

This structure appears to be typical of many through trusses built in Nebraska. Due to alterations, it has lost integrity and is not eligible for the National Register.

NAME(S) OF STRUCTURE
Little Nemaha River Bridge

PHOTOS AND SKETCH MAP OF LOCATION

LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006413305; Proceedings of the Nemaha County Commissioners, 1892-1927, located in Nemaha County Courthouse, Auburn, Nebraska; State of Nebraska, "Standard Bridge Plan, 120 Foot Span, 7 Panel High Truss," 4 June 1918, plan number 505, located in Bridge Division, Nebraska Department of Roads; field inspection by Jeffrey A. Hess, 19 July 1989.

INVENTORIED BY
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DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Whiskey Run Bridge
NDOR: C006423445

NEMA15

DATE(S) OF CONSTRUCTION
ca.1905

LOCATION
county road over Whiskey Run; S24/25, T4N, R16E
3 miles south, 0.2 mile west of Nemaha; Nemaha County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 24)

CONDITION
good

OWNER
Nemaha County

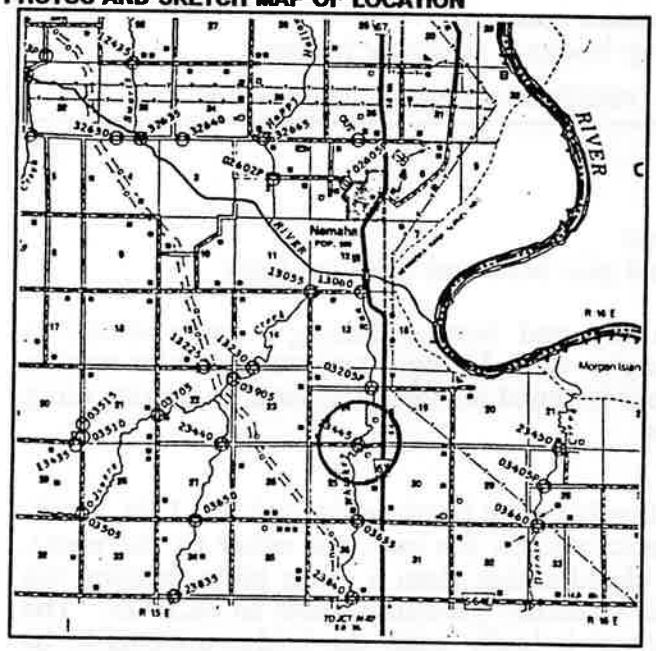
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt pony truss
span length:	40.0'	substructure:	steel pile and concrete abutments, with steel pile bent and cylinder piers
total length:	83.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	13.4'	other features:	upper chord: back-to-back channels with top and bottom lacing; lower chord: 2 rectangular-section eyebars; vertical: 4 angles with lacing; counter: circular-section eyerods with turnbuckles; floor beam: I-beam fastened to superstructure by U-bolts hung over lower pin connections; railing: angles

Bridge Number C006423445 carries a county road over Whiskey Run and is located on the line between Sections 24 and 25, T4N, R16E, Aspinwall Precinct. The bridge consists of three spans: two steel stringer approaches (one located to the east, the other to the west), and one three-panel, pin-connected, Pratt pony truss. V-lacing was used to tie the upper chord rather than a cover plate, leaving the upper chord members "open." Such light construction is typical of early bridges, and this structure probably dates to ca.1905. The narrow roadway width is also consistent with this early date. Although the northeast endpost is badly bent, the bridge appears to be unaltered and has good integrity.

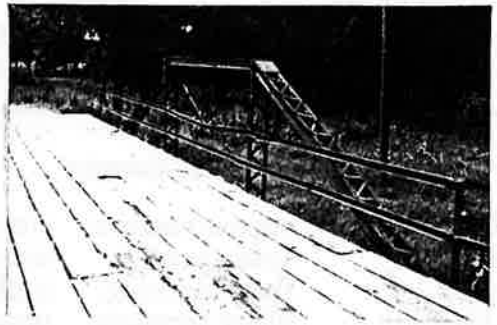
Although the laced endposts are unusual, this bridge is in reality a subtype of Nebraska's most common truss configuration.

NAME(S) OF STRUCTURE
Whiskey Run Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006423445; Proceedings of the Nemaha County Commissioners, 1892-1927, located in Nemaha County Courthouse, Auburn, Nebraska; field inspection by Jeffrey A. Hess, 19 July 1989.

INVENTORIED BY
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AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Little Nemaha River Bridge NEMA16
NDOR: C006432635

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
county road over Little Nemaha River; S33, T5N, R15E/S4, T4N, R16E
0.5 mile north, 3.3 miles west of Nemaha; Nemaha County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 20)

CONDITION
good

OWNER
Nemaha County

span number: 1
span length: 120.0'
total length: 269.0'
roadway wdt.: 13.1'

superstructure: steel, 7-panel, pin-connected Pratt through truss
substructure: H-pile abutments and piers
floor/decking: wood deck over I-beam stringers
other features: upper chord: back-to-back channels with cover plate and battens; lower chord: 2 rectangular-section eyebars; vertical: back-to-back channels with lacing; diagonal: 2 rectangular section eyebars; counter: circular-section eyerod; portal: back-to-back angles; overhead strut: back-to-back angles; top and bottom lateral: cross-braced circular-section eyerod; floor beam: I-beam fastened to superstructure by means of U-bolts hung over low pin connections; railing: angles

Bridge Number C006432635 carries a county road over the Little Nemaha River. The bridge is located on the line between Section 33, T5N, R15E, London Precinct, and Section 4, T4N, R16E, Nemaha Precinct. The structure is comprised of five steel stringer approaches (three to the east, and two to the west), and one pin-connected Pratt through truss. County records do not provide a construction date, but the bridge is similar to state-designed bridges built in the 1910s and early 1920s. The bridge's narrow roadway width is also consistent with this date.

This structure is typical of many Nebraska through trusses.

NAME(S) OF STRUCTURE
Little Nemaha River Bridge

PHOTOS AND SKETCH MAP OF LOCATION

LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006432635; State of Nebraska, "Standard Bridge Plan, 120 Foot Span, 7 Panel-Pin Connected High Truss-Wood Floor," 15 July 1915, revised 1922, plan number 468, located in Bridge Division, Nebraska Department of Roads; Proceedings of the Nemaha County Commissioners, 1892-1927, located in Nemaha County Courthouse, Auburn, Nebraska; field inspection by Jeffrey A. Hess, 19 July 1989

INVENTORIED BY
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AFFILIATION
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Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Brownville Bridge
NDOR: S136 24018

NEMA17

DATE(S) OF CONSTRUCTION
1939

LOCATION
U.S. Highway 136 over the Missouri River; S12, T5N, R16E
east edge of Brownville; Nemaha County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP eligible (score: 70)

CONDITION
good

OWNER
State of Missouri

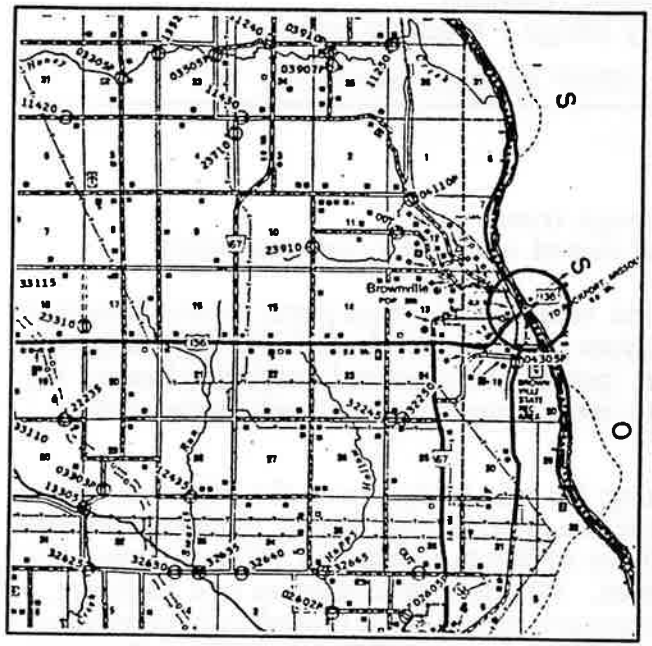
span number:	2	superstructure:	steel, rigid-connected Warren cantilever through truss
span length:	420.0'	substructure:	concrete abutments with concrete back- and sloped wingwalls; concrete piers
total length:	1904.0'	floor/decking:	concrete deck over I-beam stringers
roadway wdt.:	22.5'	other features:	upper chord: 2 channels with cover plate and ventilated bottom plate; lower chord: 2 channels with cover plate and ventilated bottom plate; vertical: wide flange; diagonal: 2 ventilated channels with continuous plate; portal and overhead bracing: I-beam; top lateral: cross-braced I-beam; bottom lateral: cross-braced back-to-back angle-sections

The Atchison County (Missouri) Board of Supervisors appears to have initiated the planning for this bridge over the Missouri River, securing the prestigious firm, Ash, Howard, Needles and Tammen (AHNT) for design construction supervision. AHNT modeled the new structure on another two-span, continuous truss bridge they had built over the Missouri River at South Omaha in 1934-35, changing details and construction methods of the previous design to improve aesthetics and reduce cost. Whereas, according to one engineer, a "hodge podge of deck trusses, girder spans and trestles" were used for the South Omaha approach spans, AHNT used only continuous deck girder approaches for the Brownville Bridge. Construction on the structure began early in 1939, with the Bethlehem Steel Company fabricating and erecting the superstructure, the C.F. Lytle Company building the substructure, and the C.H. Atkinson Paving Company completing the earth embankments. The bridge was completed by October 1939. Total project cost: $708,878.54. The Missouri Highway Commission provided $50,000, and the Federal Emergency Administration of Public Works provided a grant of $311,580. Atchison County issued bonds for the balance of the costs, and operated the bridge as a toll crossing to repay its bondholders and cover maintenance expenses. In 1945 the Nebraska Department of Roads and Irrigation reported that the bridge was in "excellent" condition, although the concrete in the piers was cracking and in need of immediate repair. No major alterations appear to have been made to the structure, which is now owned and maintained by the State of Missouri as a "free" crossing.

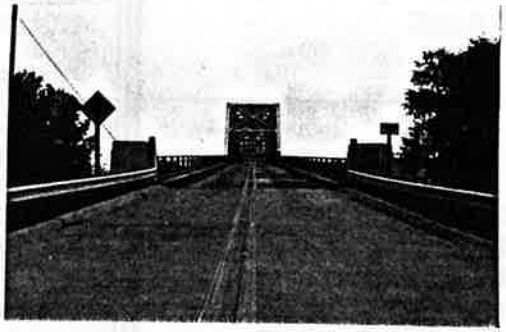
The Brownville Bridge is significant for its innovative pier design and association with the prestigious engineering firm of Ash, Howard, Needles and Tammen. Spanning a major river and replacing a ferry site reportedly in use since before the Civil War, the bridge also played an important role in the development of the region's economy and transportation facilities. Perhaps most significantly, the Brownville Bridge could not have been completed without grants from the Public Works Administration, and illustrates the federal government's role in developing Nebraska's infrastructure during the Depression Era.

NAME(S) OF STRUCTURE
Brownville Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number S136 24018; Nebraska Department of Roads and Irrigation, Twenty-Third Biennial Report, 1939-1940, p. 23; Ned L. Ashton, "Comments on Design and Construction of Various Mississippi River Bridges," lecture to the American Society of Civil Engineers, Tri-City Section, Davenport, 6 April 1944, copy at the Iowa State Historical Society, Des Moines, Iowa; Henry G. Schlitt, "Missouri River Bridges, Report #2," 7 November 1945, located in Bridge Department Files, Nebraska Department of Roads; field inspection by Jeffrey A. Hess, 19 July 1989

INVENTORIED BY
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DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Culvert NEMA18
NDOR: none

DATE(S) OF CONSTRUCTION
ca.1933-1942

LOCATION
county road over stream; S27/34, T4N, R14E
3 miles south, 0.25 miles west of Howe; Nemaha County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 22)

CONDITION
good

OWNER
Nemaha County

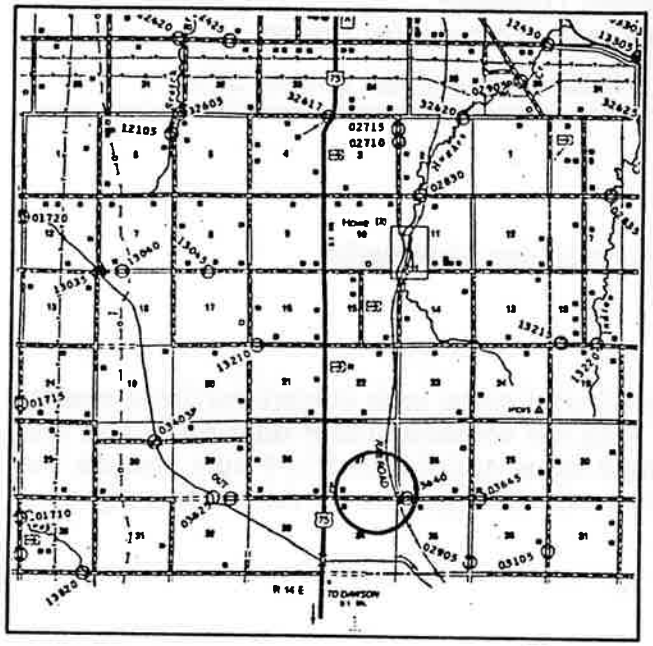
span number:	3	superstructure:	stone arch culvert
span length:	approx. 6'	substructure:	stone abutments and piers and stepped, perpendicular wing walls
total length:	approx. 24'	floor/decking:	gravel over earth fill
roadway wdt.:	approx. 24'	other features:	no guardrail

Located on the line between Sections 27 and 34, T4N, R14E, in Bedford Precinct, this triple-barrel stone arch culvert carries a county road over an unnamed stream. The structure is constructed of coursed, quarried limestone, with the voussoir stones uniform in size and neatly laid, reflecting the high quality of workmanship. The bridge appears similar to a single stone arch located 1/4 mile east on the same road (NEMA09). Both bridges were probably constructed as part of a Depression-Era work-relief program, which generally date between 1933 and 1942. The structure is in good condition and has good integrity.

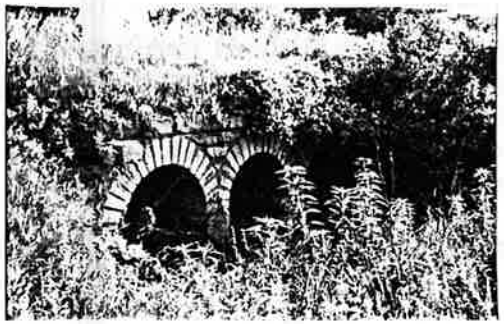
This is a typical example of Depression-Era stone arch bridge construction.

NAME(S) OF STRUCTURE
Culvert

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Proceedings of the Nemaha County Commissioners, 1892-1927, located in Nemaha County Courthouse, Auburn, Nebraska; field inspection by Jeffrey A. Hess, 19 July 1989

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Little Blue River Bridge
NDOR: C006504525

NUCK01

DATE(S) OF CONSTRUCTION
ca.1925

LOCATION
county highway over Little Blue River; S22/23, T3N, R5W
1.3 miles east, 1.1 miles south of Oak; Nuckolls County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 22)

CONDITION
good

OWNER
Nuckolls County

span number: 1
span length: 100.0'
total length: 193.0'
roadway wdt.: 15.6'

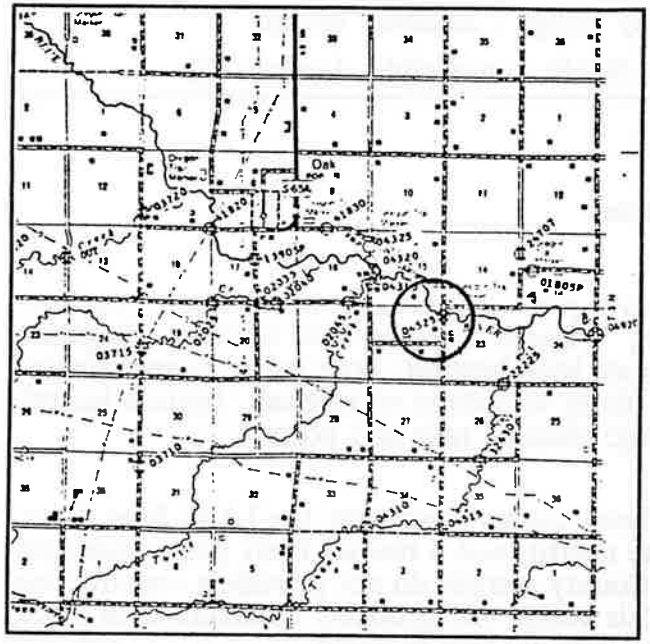
superstructure: steel, 6-panel, rigid-connected Pratt pony truss
substructure: steel pile bent abutments and pier
floor/decking: timber deck over I-beam stringers
other features: upper chord: back-to-back channels with cover plate and lacing; lower chord: back-to-back channels with top and bottom battens; vertical: 4 angles with battens; diagonal: 2 angles with battens; sway bracing: solid plate knee bracing; floor beam: I-beam riveted to angles which are bolted through gusset plates to bottom of vertical; bottom lateral: cross-braced circular-section eyerods; railing: channel rails and posts

Located southeast of the small town of Oak, this medium-scale truss carries a gravel-surfaced county road over the Little Blue River. The bridge consists of three steel stringer approaches (two located on the south, one on the north), and a riveted Pratt pony truss over the main channel of the river. The bridge appears to be unaltered and has good integrity. County records do not provide a construction date, however 100-foot pony trusses did not become common until the 1920s and 1930s. This bridge was probably constructed ca.1925, as it has a relatively narrow, 15.6-foot wide roadway. By the 1930s, most bridges were at least 20 feet in width.

This structure is typical of many state-designed, riveted pony trusses built during the 1920s and 1930s.

NAME(S) OF STRUCTURE
Little Blue River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006504525; Proceedings of the Nuckolls County Commissioners, 1889-1930, located in Nuckolls County Courthouse, Nelson, Nebraska; field inspection by Jeffrey A. Hess, 22 July 1989

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Stewart Bridge
NDOR: C006510245

NUCK02

DATE(S) OF CONSTRUCTION
1915

LOCATION
county road over Big Sandy Creek; S3, T4N, R5W
1 mile east, 8 miles north of Oak; Nuckolls County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 40)

CONDITION
good

OWNER
Nuckolls County

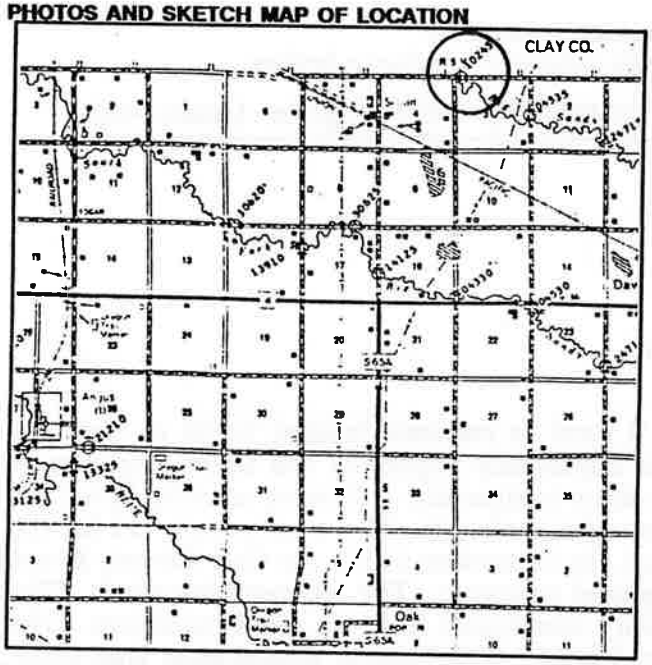
span number:	1	superstructure:	concrete filled spandrel arch
span length:	45.0'	substructure:	concrete abutments and wingwalls
total length:	47.0'	floor/decking:	gravel over earth fill
roadway wdt.:	16.1'	other features:	solid concrete parapet with recessed panels

In June 1915 the Clay County Road and Bridge Committee recommended building a "45 ft steel or concrete bridge, wood or concrete floor, with cement abutments and wings, between secs 34 Clay, and sec 3 Nuckolls," and apparently requested the State Engineer to prepare plans for the structure. The Clay County Board opened bids for this and several other bridges the following month, opted for concrete construction on all, and awarded the contract to the Lincoln Construction Company of Lincoln NE. The contractor's bid for the Stewart Bridge was $1,890, the cost to be evenly divided between Nuckolls and Clay counties. In December 1915, the Clay County Board requested that the State Engineer dispatch a member of his office to inspect the newly completed structure. The engineer reported: "The Stewart Bridge, being a 45 foot concrete arch on the line between Nuckolls and Clay County was found to be in good condition. The pavement and wings were slightly soft but the arch ring appeared to be thoroughly set and hard. The general appearance was good. The rails were straight with the exception of the north rail which leans slightly to the north at the top. The Nuckolls County Board were [sic] present at the time the inspection was made and were satisfied with the work. I recommend that the bridge be accepted and paid for." The structure has carried traffic since, in essentially unaltered condition.

With its filled spandrel design and modestly paneled guardrails, the Stewart Bridge is typical of the many concrete arch bridges built in Nebraska from highway department standard plans during the 1910s.

NAME(S) OF STRUCTURE
Stewart Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006510245; Proceedings of the Clay County Commissioners, located in the Clay County Courthouse, Clay Center, Nebraska, refer to the following entries in Volume 7: 9 June 1915 (page 415), 13 July 1915 (pp. 423-25), 1 December 1915 (p. 442), 22 December 1915 (p. 445); Proceedings of the Nuckolls County Commissioners, Nuckolls County Courthouse, Nelson, Nebraska, 1915; see plans for a 45-foot pin-connected truss with wood floor, and a 45-foot riveted truss with concrete floor, entitled: "Foundation Plan for 45 ft Span, Steward [sic] Bridge, South Line, 34-T5N-R5W," 25 May 1915, Microfiche Bridge Plan Number 537, located in the Bridge Division, Nebraska Department of Roads; field inspection by Jeffrey A. Hess, 23 April 1989

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Sand Creek Bridge
NDOR: C006511115

NUCK03

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county highway over Sand Creek; S35/36, T2N, R8W
5.5 miles west, 4.5 miles north of Superior; Nuckolls County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 19)

CONDITION
good

OWNER
Nuckolls County

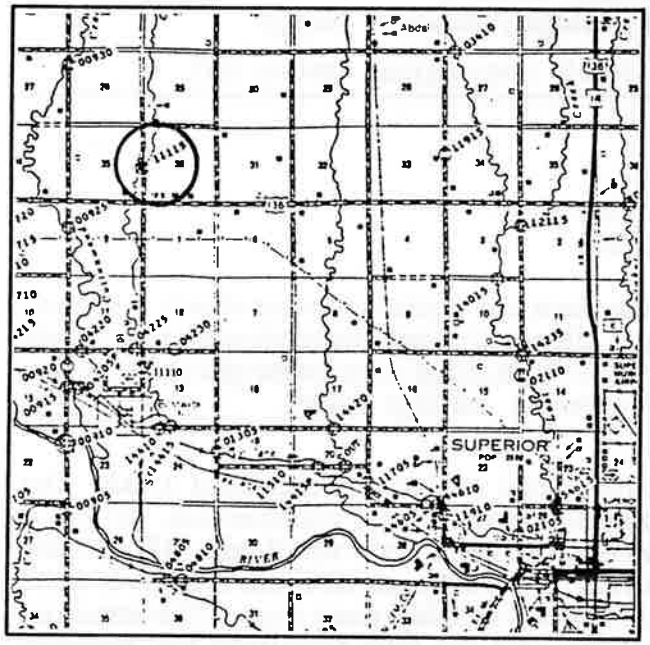
span number:	1	superstructure:	steel, 2-panel, pin-connected Pratt half-hip pony truss
span length:	30.0'	substructure:	steel pile bent abutments with timber backwall
total length:	31.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.8'	other features:	upper chord: back-to-back channels with cover plate and battens; lower chord: 2 square-section eyerods; vertical: 4 angles with lacing; diagonal: 2 square-section eyerods; floor beam: I-beam fastened to the superstructure by U-bolts hung over lower pin connections; bottom lateral: cross-braced circular-section eyerods; railing: lattice

Nuckolls County built its first steel bridge in 1900, although it did not award its first annual steel bridge contract until 1903. The county built steel bridges intermittently until 1910, after which time the board regularly authorized steel bridge construction. In 1912, the county board adopted state bridge plans, requiring that all county bridges be built in accordance with state standards. These state plans did not include half-hip Pratt trusses: the Sand Creek Bridge must, therefore, predate 1912. Carrying a north-south road over Sand Creek between Sections 35 and 36 in Alban Precinct, the bridge consists of a single-span, pinned Pratt half-hip pony truss. This structure and another half-hip Pratt pony truss (**NUCK04**) are probably the earliest bridges in the county, and the only structures still standing which date to the county's early experimentation with non-standard, steel truss construction.

This structure is typical of many half-hip pony trusses built in Nebraska during the early 1900s. It is also significant as one of the earliest steel bridges remaining in the county.

NAME(S) OF STRUCTURE
Sand Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006511115; Proceedings of the Nuckolls County Commissioners, 1889-1935, located in Nuckolls County Courthouse, Nelson, Nebraska; field inspection by Jeffrey A. Hess, 22 July 1989

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Lost Creek Bridge
NDOR: C006554615

NUCK04

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county highway over Lost Creek; S21, T1N, R7W
northwest corner of Superior; Nuckolls County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING determined NRHP eligible (score: 20)

CONDITION
good

OWNER
Nuckolls County

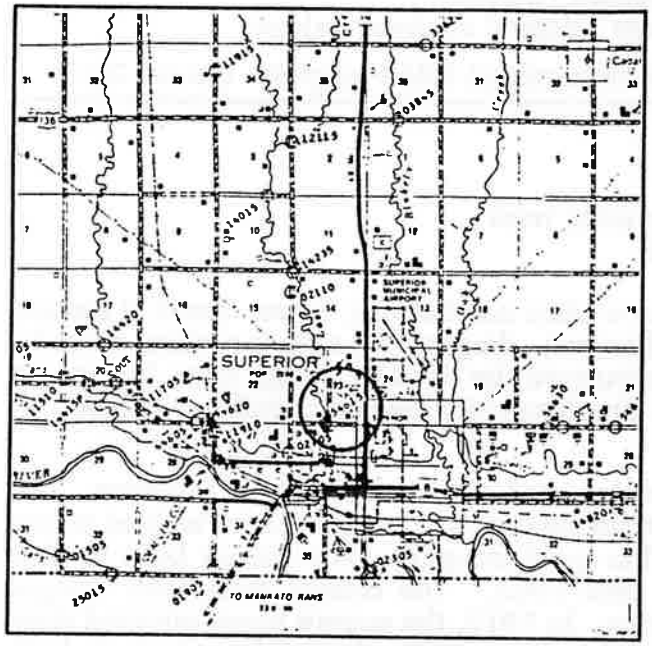
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt half-hip pony truss
span length:	50.0'	substructure:	wood pile abutments with timber backwall
total length:	50.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	15.7'	other features:	upper chord: back-to-back channels with cover plate and battens; lower chord: 2 square-section eyerods; vertical: 4 angles with battens; diagonal: 2 square-section eyerods; floor beam: I-beam connected to superstructure by U-bolts hung over lower pin connections; bottom lateral: cross-braced circular-section eyerods; railing: lattice

Until its recently closure to traffic, this small-scale truss carried a north-south half-section-line road over Lost Creek in Superior. The bridge is a steel, three-panel, pin-connected pony truss measuring 50-feet in length. Other than channel-section barricades welded across the end posts, and some minor splice welding to a diagonal, the bridge is unaltered and has good integrity. The county built its first steel bridge in 1900, although it did not award its first annual steel bridge contract until 1903. The county built steel bridges intermittently until 1910, after which, the board regularly authorized steel bridge construction. In 1912, the county board adopted state bridge plans, requiring that all county bridge work be built in accordance with state standards. These state plans did not include half-hip Pratt trusses, and so the Lost Creek Bridge must predate 1912. This bridge and another half-hip Pratt pony truss (NUCK03) are probably the earliest bridges in the county, and the only structures still standing which date to the county's early experimentation with non-standard, steel truss construction.

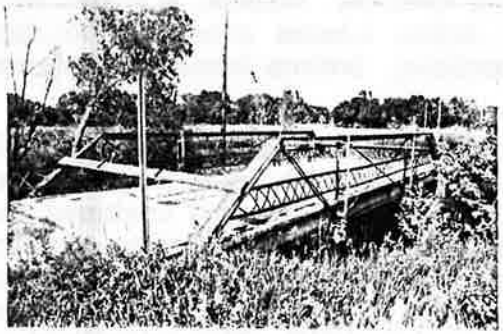
The Lost Creek Bridge has been determined eligible for listing in the National Register under Criterion A, for its historical association with the development of steel truss construction in Nuckolls County. It is one of only two steel trusses which date to the county's period of non-standard, steel truss construction, which lasted from 1900 to 1912. The other steel truss, Bridge Number C006511115, is not eligible, as C006554615 is longer and displays lighter construction, suggesting an earlier date.

NAME(S) OF STRUCTURE
Lost Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006554615; Proceedings of the Nuckolls County Commissioners, 1889-1930, located in Nuckolls County Courthouse, Nelson, Nebraska; field inspection by Jeffrey A. Hess, 22 July 1990

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Eighth Street Bridge
NDOR: U2360G4605

NUCK05

DATE(S) OF CONSTRUCTION
1919

LOCATION
Eighth Street over Lost Creek; S26, T1N, R7W
City of Superior; Nuckolls County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 32)

CONDITION
good

OWNER
City of Superior

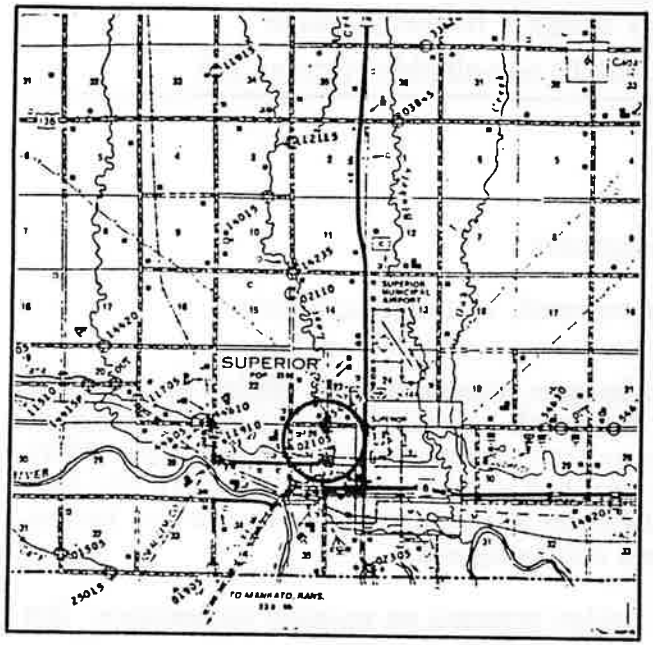
span number:	1	superstructure:	concrete deck girder
span length:	35.0'	substructure:	concrete abutments with straight, sloped wingwalls
total length:	36.0'	floor/decking:	concrete
roadway wdt.:	31.0'	other features:	railing: concrete parapets with two rows of recessed, rectangular panels

Spanning Lost Creek in the City of Superior, the Eighth Street Bridge is a skewed, single-span, concrete deck girder on concrete abutments. Due to the skew, the concrete beams are set in an unusual radial pattern and the south parapet is curved. Both parapets are detailed with two rows of recessed rectangular panels. The date 1919 is inscribed in the southwest corner of the north railing. With the exception of a utility pipe on the outside of the north parapet, the bridge is unaltered and has good integrity. Although the date of construction is clearly marked on the structure, neither the city or county minutes for 1919 make any specific reference to this bridge. The county built its first concrete bridges in 1911, and concrete construction rapidly became commonplace.

With its skewed deck, radiating girders and oddly proportioned guardrails, the Eighth Street Bridge presents an unusual appearance. But this structure in reality is a relatively late example of a standard vehicular bridge type.

NAME(S) OF STRUCTURE
Eighth Street Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number U2360G4605; Proceedings of the County Commissioners, 1889-1930, located in Nuckolls County Courthouse, Nelson, Nebraska; Demian Hess, telephone interview with Roy Aberg, Superior City Clerk, 9 April 1990; field inspection by Jeffrey A. Hess, 22 July 1990

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C006600255

OTOE01

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over unnamed stream; S6, T9N, R12E
9.6 miles northeast of Syracuse; Otoe County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 13)

CONDITION
good

OWNER
Otoe County

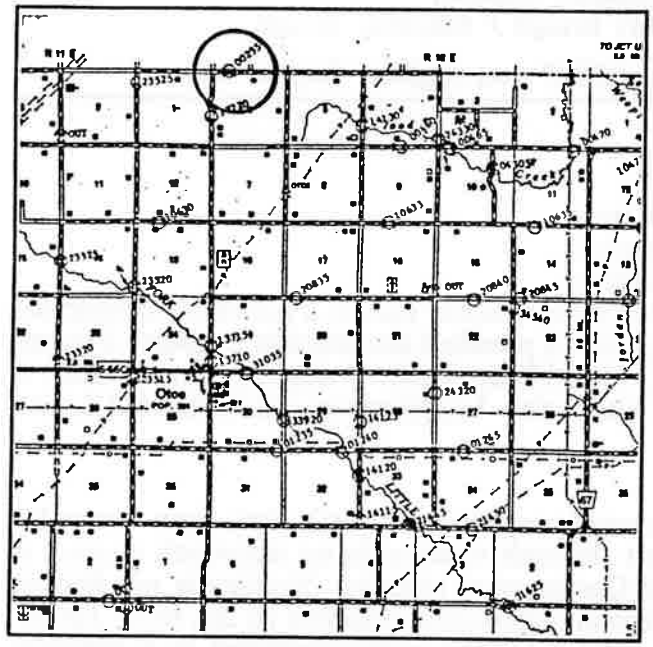
span number: 1
span length: 80.0'
total length: 80.0'
roadway wdt.: 15.6'

superstructure: steel, 5-panel, pin-connected Pratt through truss
substructure: steel pile bent abutments with timber wingwalls
floor/decking: gravel over corrugated steel over steel stringers
other features: upper chord: 2 channels with cover and batten plates; lower chord: 2 punched rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 punched rectangular eyebars; 2 round eyebars with turnbuckles; lateral bracing: round bar; strut: 2 angles; floor beam: I-beam field bolted to vertical; guardrail: 2 channels; bridge plate: **J.R SHEELEY & CO. LINCOLN NEB.**

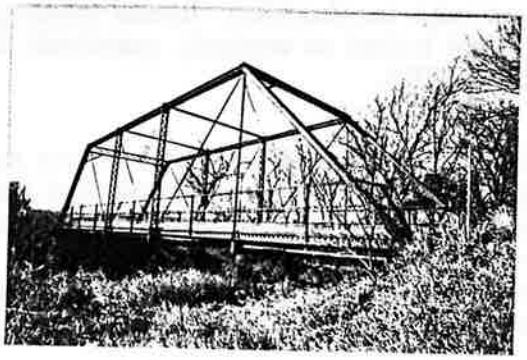
This short-span through truss carries the gravel-surfaced Cass County line road across an unnamed stream a little less than ten miles northeast of Syracuse. The bridge consists of a single-span, five-panel, pin-connected Pratt through truss with no approach spans. A builder's plate mounted on an end post notes that the bridge was built by J.R. Sheeley and Company of Lincoln. Sheeley is not known to have built bridges in Otoe County, but the Lincoln-based contractor was active in other eastern Nebraska counties in the early 1900s. It is possible, therefore, that the truss has been moved in to this location at a later date. The bridge is undistinguished as a typically configured and modestly dimensioned example of a common vehicular truss type.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006600255; bridge plate; Proceedings of the Otoe County Commissioners, on file in the Otoe County Courthouse, Nebraska City, Nebraska, refer to the following entries: 4 April 1905, book 7, page 358; 9 January 1907, book 7, page 563; 4 November 1908, book 8, page 69; April 1909, book 8, page 106; December 1909, book 8, page 155; April 1911, book 8, page 247; 10 February 1914, book 9, page 18; 17 February 1915, book 9, page 120; field inspection by Clayton Fraser, 14 November 1989.

INVENTORIED BY
Clayton B. Fraser and Sheila Bricher-Wade

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Hooper Creek Bridge
NDOR: C006600305P

OTOE02

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over Hooper Creek; S8, T9N, R9E
4.6 northwest of Palmyra; Otoe County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 19)

CONDITION
fair

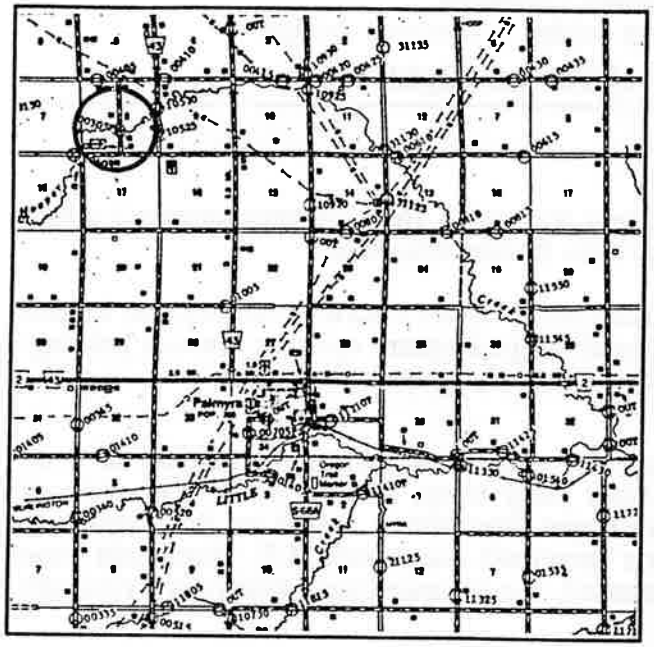
OWNER
Otoe County

span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt half-hip pony truss with steel stringer approach spans
span length:	40.0'	substructure:	steel pile bent and steel cylinder abutments with timber wingwalls
total length:	64.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	13.6'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 rectangular looped eyebars; vertical: 4 angles with lacing; diagonal: looped square eyebars; lateral bracing: round bar; floor beam; I-beam field bolted to vertical; guardrail: lattice

This small-scale bridge carries a secondary county road over Hooper Creek a little less than five miles northwest of Palmyra, in Otoe County's northwest corner. The bridge consists of a three-panel, half-hip pin-connected Pratt pony truss, flanked by a steel stringer approach span on either end. The bridge appears in good physical condition, and has had no major alterations. Based on its dimensions and design attributes, this truss appears to have been built ca.1910, during a period in which Tecumseh contractor H.T. Ward held Otoe County's annual bridge construction contracts. With its construction history largely undocumented, the Hooper Creek Bridge is a typically configured example of an exceedingly common structural type.

NAME(S) OF STRUCTURE
Hooper Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006600305P; Proceedings of the Otoe County Commissioners, on file in the Otoe County Courthouse, Nebraska City, Nebraska, refer to the following entries: 4 April 1905, book 7, page 358; 9 January 1907, book 7, page 563; 4 November 1908, book 8, page 69; April 1909, book 8, page 106; December 1909, book 8, page 155; April 1911, book 8, page 247; 10 February 1914, book 9, page 18; 17 February 1915, book 9, page 120; field inspection by Clayton Fraser and Sheila Bricher-Wade, 14 November 1990.

INVENTORIED BY
Clayton B. Fraser and Sheila Bricher-Wade

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C006601120P

OTOE03

DATE(S) OF CONSTRUCTION
1907

LOCATION

county road over unnamed stream; S13, T7N, R9E
1.9 miles southeast of Douglas; Otoe County, Nebraska

USE (ORIGINAL / CURRENT)

roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 19)

CONDITION

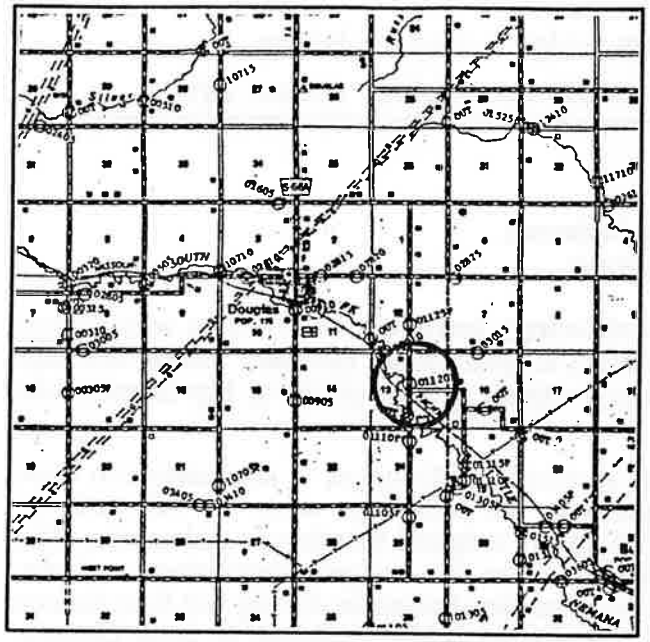
OWNER
Otoe County

span number:	1	superstructure:	steel, 2-panel, pin-connected Pratt truss leg bedstead
span length:	30.0'	substructure:	steel pile bent abutments with timber wingwalls
total length:	31.0'	floor/decking:	timber over steel stringers
roadway wdt.:	15.8'	other features:	upper chord: 2 channels with cover plates and lacing; lower chord: 2 angles with batten plates; vertical: 2 angles with lacing; diagonal: 2 looped square eyebars; lateral bracing: round bar; floor beam: I-beam field bolted to vertical; gusset plates at hip connections

This bridge carries an unpaved county road over a small watercourse approximately two miles southeast of Douglas, in southwestern Otoe County. The bridge was originally built as a truss leg bedstead. At some later point, however, the truss legs were cut off, and the superstructure was moved to its present location, where it now rests on steel pile bents. The span's original location is unknown. The Nebraska Department of Roads assigns a construction date of 1907; a date that seems credible based on the bridge's appearance and pin-connected technology. Truss leg bedsteads reportedly first appeared in Nebraska circa 1896 and remained popular during the first decade of the twentieth century. Between 1895 and 1899, A.C. Henderson of Savannah, Missouri, dominated bridge building in Otoe County. But, in the years just after the turn of the century, many contractors received contracts to erect bridges in the county. These included John Gilligan of Falls City, H.T. Ward of Tecumseh, and John W. Towle of Omaha. One of these builders likely erected this truss somewhere in the county. Less likely, but still a possibility, is the theory that the span was moved to its present location from a different county. With its construction history undocumented and the truss evidently moved, this small-scale span appears to lack any appreciable levels of either significance or integrity.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006601120P; field inspection by Clayton Fraser, 14 November 1989; Ted Johnson, "Discussion of Steel Foundations for Steel Bridges Constructed in the Missouri Valley," **Nebraska Blue Print** 26 (February 1927): 11; field inspection by Clayton Fraser and Sheila Bricher-Wade, 14 November 1990.

INVENTORIED BY
Clayton B. Fraser and Sheila Bricher-Wade

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Little Nemaha River Bridge OTOE04
NDOR: C006601515

DATE(S) OF CONSTRUCTION
ca.1925

LOCATION
county road over South Fork of Little Nemaha River Bridge; S29/30, T7N, R10E
1.8 miles northwest of Burr; Otoe County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 20)

CONDITION
good

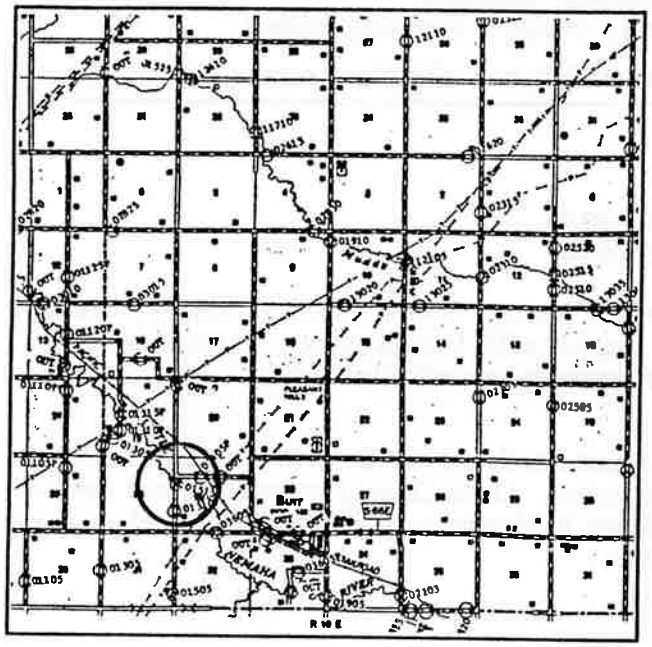
OWNER
Otoe County

span number:	1	superstructure:	steel, 4-panel, rigid-connected Warren pony truss
span length:	70.0'	substructure:	steel pile bent abutments with timber backwalls
total length:	71.0'	floor/decking:	timber over steel stringers
roadway wdt.:	15.5'	other features:	upper chord: 2 channels with cover plates and lacing; lower chord: 2 angles; vertical: 4 angles with batten plates; diagonal: 2 angles with batten plates; lateral bracing: 1 angle; floor beam: I-beam field bolted to vertical; guardrail: timber

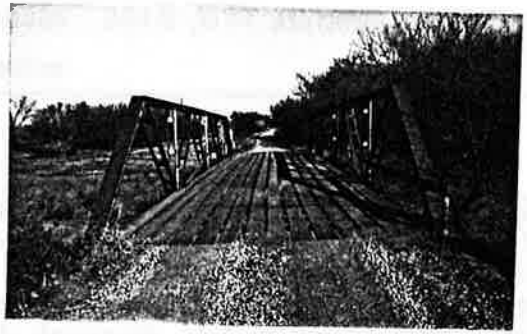
This bridge carries a gravel-surfaced county road over the Little Nemaha River about two miles northwest of Burr in southwestern Otoe County. The bridge is a simply supported, riveted Warren pony truss on steel pile bent abutments. Otoe County records do not mention this structure specifically, but it appears to have been built ca.1925. The Little Nemaha River Bridge is a typically configured example of riveted truss technology. Its lack of documentation limits the bridge's interpretive value.

NAME(S) OF STRUCTURE
Little Nemaha River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006601515; Proceedings of the Otoe County Commissioners, on file in the Otoe County Courthouse, Nebraska City, Nebraska, refer to the following entries: April 1909, book 8, page 106; December 1909, book 8, page 155; April 1911, book 8, page 247; 5 December 1911, book 8, page 289; 10 February 1914, book 9, page 18; 17 February 1915, book 9, page 120; field inspection by Clayton Fraser, 14 November 1989.

INVENTORIED BY
Clayton B. Fraser and Sheila Bricher-Wade

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C006601805P

OTOE05

DATE(S) OF CONSTRUCTION
1912

LOCATION
county road over unnamed stream; S18, T8N, R14E
1.5 miles southwest of Nebraska City; Otoe County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 38)

CONDITION
good

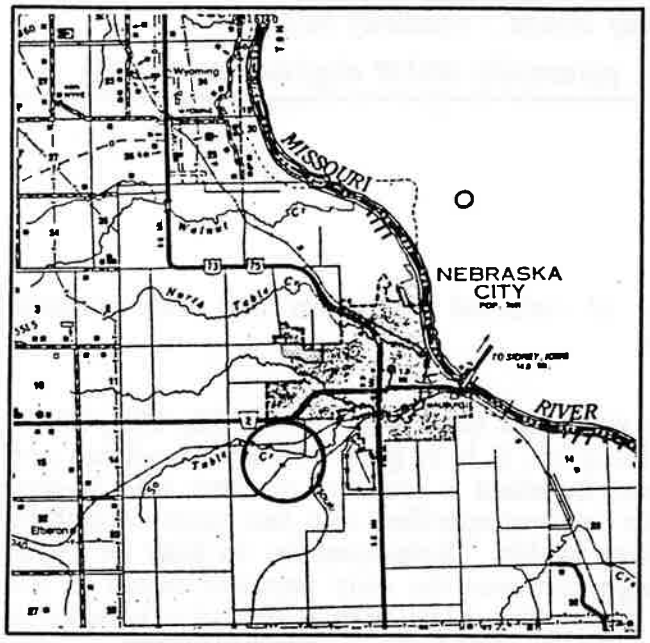
OWNER
Otoe County

span number:	1	superstructure:	concrete filled spandrel arch
span length:	24.0'	substructure:	concrete abutments and wingwalls
total length:	28.0'	floor/decking:	gravel over earth fill
roadway wdt.:	13.8'	other features:	ornamental concrete guardrail, consisting of corbeled bulkheads and cast concrete balusters; incised panels on spandrel walls

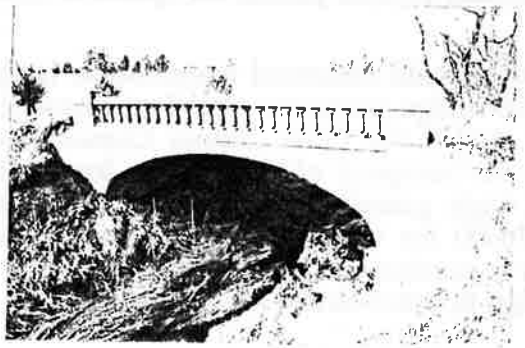
This bridge carries a gravel-surfaced county road over a small unnamed watercourse in the southeast quarter of section 18, T8N, R14E, less than two miles southwest of Nebraska City. The bridge possesses excellent physical integrity; it is in good physical condition and has had no noticeable alterations. On February 6, 1912, the Otoe County Commissioners awarded a contract to erect this 24-foot reinforced concrete arch to the Kimballton Construction Company of Kimballton, Iowa. The contract specified that the concrete arch be complete with wingwalls, have 8-inch wide 3-foot high guardrails, and a 16-foot roadway width. Subsequently, in May of 1912, Kimballton received payment in the amount of $974.00 for work on the bridge. Although this was the only payment noted in the Commissioner's minutes, it plausibly represents only a portion of the bridge's total cost. Today this small span is one of a handful of concrete arches remaining in Otoe County. The bridge is noteworthy for its high degree of detailing and quality workmanship.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006601805P; Otoe County Commissioners' Minutes: Book 8, page 306, 6 February 1912; Book 8, page 318, May 1912; field inspection by Clayton Fraser and Sheila Bricher-Wade, 14 November 1990..

INVENTORIED BY
Clayton B. Fraser and Sheila Bricher-Wade

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Little Nemaha River Bridge
NDOR: C006602103

OTOE06

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over the Little Nemaha River; S34/35, T7N, R10E
1.5 miles southeast of Burr; Otoe County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 10)

CONDITION
good

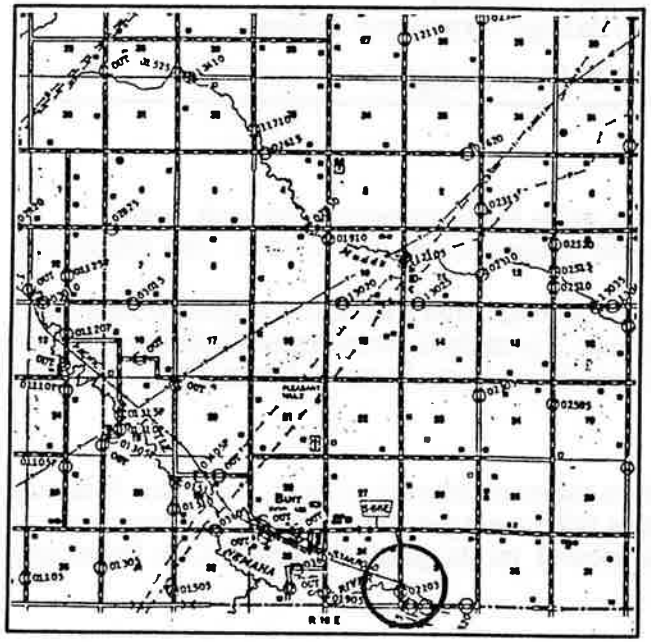
OWNER
Otoe County

span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt pony truss with steel stringer approach span
span length:	70.0'	substructure:	steel/timber pile bent pier and abutments with timber/sheet piling back- and wingwalls
total length:	107.0'	floor/decking:	timber decking over steel stringers
roadway wdt.:	13.7'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 angles with batten plates; vertical: 4 angles with lacing; diagonal: 2 punched rectangular eyebars; 1 round eyebar with turnbuckle; lateral bracing: round bar; floor beam: I-beam field bolted to vertical: guardrail: lattice

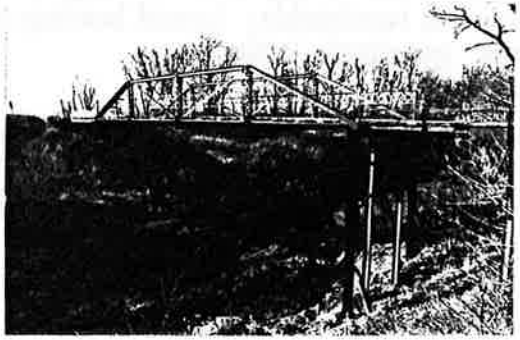
This bridge carries an unpaved county road across the Little Nemaha River a little less than two miles southeast of Burr, near the Johnson County line. The structure consists of a single-span, four-panel, pin-connected Pratt pony truss with a single steel stringer approach span. The Little Nemaha River Bridge is in good physical condition, but appears to have been moved to its present location. It lacks any appreciable degree of significance or integrity.

NAME(S) OF STRUCTURE
Little Nemaha River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006602103; Proceedings of the Otoe County Commissioners, on file in the Otoe County Courthouse, Nebraska City, Nebraska, refer to the following entries: 4 April 1905, book 7, page 358; 9 January 1907, book 7, page 563; 4 November 1908, book 8, page 69; April 1909, book 8, page 106; December 1909, book 8, page 155; April 1911, book 8, page 247; 10 February 1914, book 9, page 18; 17 February 1915, book 9, page 120; field inspection by Clayton Fraser, 14 November 1989.

INVENTORIED BY
Clayton B. Fraser and Sheila Bricher-Wade

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Little Nemaha River Bridge
NDOR: C006602530

OTOE07

DATE(S) OF CONSTRUCTION
1901

LOCATION
county road over the Little Nemaha River; S18, T8N, R11E
3.0 miles northwest of Syracuse; Otoe County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 41)

CONDITION

OWNER
Otoe County

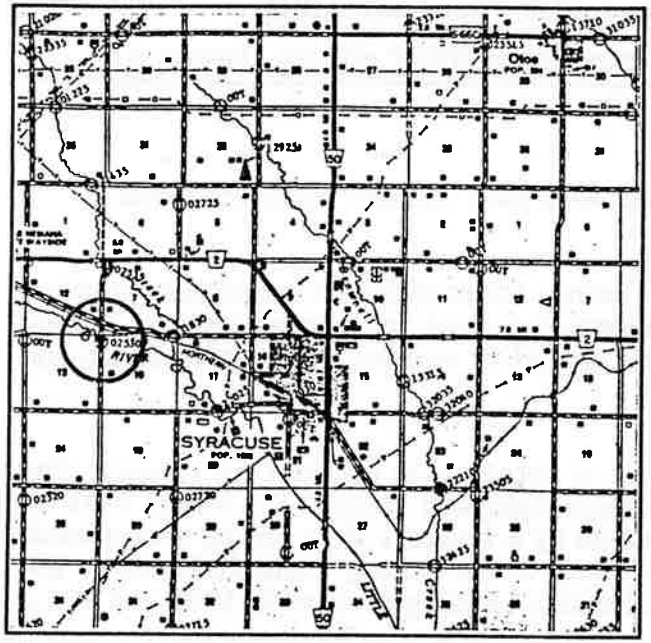
span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt pony truss with steel stringer approach spans
span length:	65.0'	substructure:	steel pile bent abutments and piers
total length:	232.0'	floor/decking:	timber decking over timber stringers
roadway wdt.:	13.6'	other features:	upper chord: 2 channels with cover plate and lacing; lower chords: 2 rectangular punched eyebars; vertical: 4 angles with lacing; diagonal: 2 looped rectangular eyebars; lateral bracing: round bar; floor beam: I-beam field bolted to vertical; guardrail: Armco and 1 angle

This bridge carries a gravel-surfaced road across the Little Nemaha River three miles northwest of Syracuse, in central Otoe County. The structure is a single-span, four-panel, pin-connected Pratt pony truss with flanking steel stringer approach spans. The bridge rests on steel pile bent abutments and piers, and appears not have been altered significantly. As indicated by a builder's plate on the bridge itself, the structure was erected in 1901 by the John Gilligan Company of Falls City, Nebraska. Minutes of the County Commissioners do not specifically reference this bridge, but they do show that Gilligan received Otoe County's annual bridge building contract in 1900 and 1901. This span is among the handful of in situ Otoe County structures attributable to Gilligan.

Marketed extensively by virtually all of the in-state bridge contractors and promoted in the form of standardized designs by the Nebraska State Engineer's office, the pinned Pratt pony truss was used widely by Nebraska's counties to carry roads over the state's myriad small streams. Thousands of such small-scale trusses were erected across the state in the late 19th and early 20th centuries, and many remain today. The Little Nemaha River Bridge is noteworthy as one of the earliest examples of this common structural type.

NAME(S) OF STRUCTURE
Little Nemaha River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006602530; Proceedings of the Otoe County Commissioners, on file in Otoe County Courthouse, Nebraska City, Nebraska, refer to the following entries in book 6: 4 January 1900, page 388; 9 February 1900, page 402; 9 January 1901, page 508; 5 February 1901, page 515; field inspection by Clayton Fraser and Sheila Bricher-Wade, 14 November 1989.

INVENTORIED BY
Clayton B. Fraser and Sheila Bricher-Wade

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Little Nemaha River Bridge
NDOR: C006602810

OTOE08

DATE(S) OF CONSTRUCTION
circa 1910

LOCATION
county road over the Little Nemaha River; S3/10, T7N, R9E
west edge of Douglas; Otoe County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 22)

CONDITION

OWNER
Otoe County

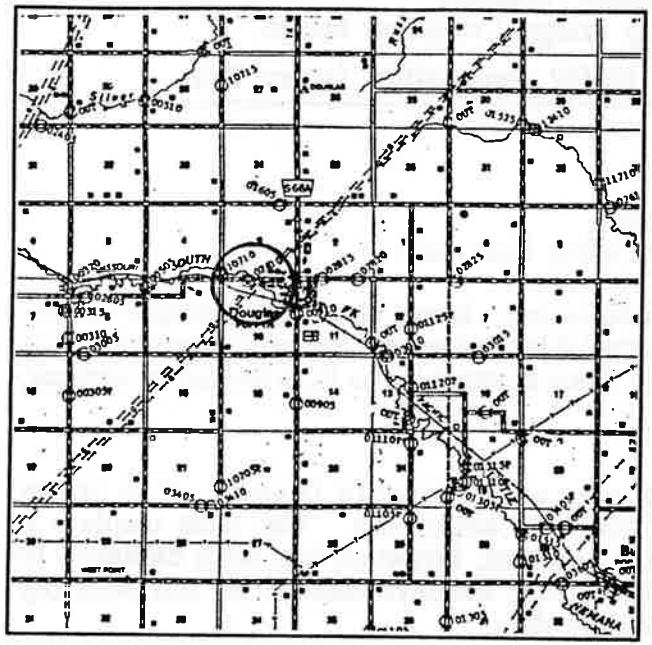
span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt pony truss
span length:	60.0'	substructure:	steel pile bent abutments with timber/sheet piling backwalls
total length:	61.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	14.0'	other features:	upper chord: 2 channels with cover plates and lacing; lower chord: 2 rectangle looped eyebars; vertical: 4 angles with lacing; diagonal: 2 looped square eyebars; 1 round eyebar with turnbuckle; lateral bracing: round bar; floor beam: I-beam field bolted to vertical; guardrail: lattice

This bridge carries a secondary county road over the Little Nemaha River on the western edge of the town of Douglas. The bridge consists of a single-span, four-panel, pin-connected Pratt pony truss, supported by steel pile bent abutments. The truss displays a reasonably high degree of historical integrity, having no apparent alterations. The northwest endpost, however, has been damaged in a collision. Although not mentioned specifically in the Otoe County Supervisors' records, the bridge displays dimensions and detailing that indicate a ca.1910 construction date. It is undistinguished both historically and technologically.

NAME(S) OF STRUCTURE

Little Nemaha River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006602810; Proceedings of the Otoe County Commissioners, on file in Otoe County Courthouse, Nebraska City, Nebraska, refer to the following entries: 4 March 1897, book 6, page 63; 8 March 1898, book 6, page 166; 7 March 1899, book 6, page 300; 9 February 1900, book 6, page 402; 5 February 1901, book 6, page 515; 19 February 1902, book 6, page 630; 9 April 1903, book 7, page 110; field inspection by Clayton Fraser, 14 November 1989.

INVENTORIED BY

Clayton B. Fraser and Sheila Bricher-Wade

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Muddy Creek Bridge
NDOR: C006603305

OTOE09

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over Muddy Creek; S22/23, T7N, R11E
6.3 miles south of Syracuse; Otoe County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 20)

CONDITION

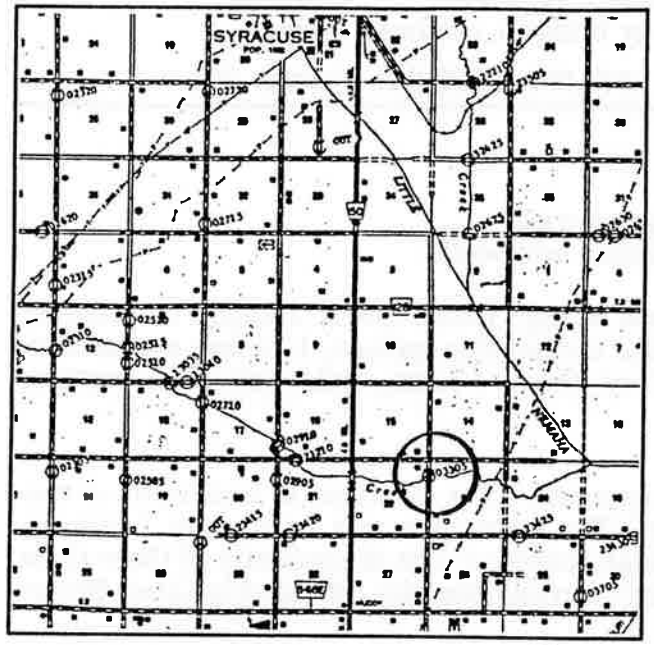
OWNER
Otoe County

span number:	2	superstructure:	steel, 4- and 5-panel, pin-connected Pratt pony truss
span length:	80.0'	substructure:	steel pile bent abutments and piers with timber wingwalls
total length:	232.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	13.7'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 angles with batten plates; vertical: I-beam; diagonal: 2 punched rectangular eyebars, 1 square eyebar with turnbuckle; lateral bracing: 1 angle; floor beam: I-beam, field bolted to vertical; guardrail: timber

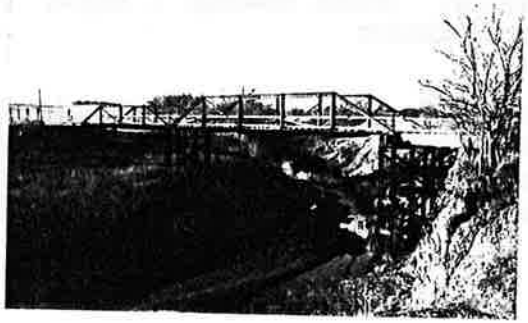
This bridge carries a secondary county road across Muddy Creek about six miles south of Syracuse. The structure is comprised of two pin-connected Pratt pony trusses, approached on the north by a single steel stringer span. The main span was erected by Tecumseh contractor H.T. Ward ca.1910, during a period in which Ward held Otoe County's annual bridge contracts. The dissimilarity of these three spans suggests that two or all were moved to this location at a subsequent date. Thus lacking physical integrity, the Muddy Creek Bridge is not eligible for the National Register.

NAME(S) OF STRUCTURE
Muddy Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006603305; Proceedings of the Otoe County Commissioners, on file in Otoe County Courthouse, Nebraska City, Nebraska, refer to the following entries: 6 February 1906, book 7, page 468; April 1909, book 8, page 106; December 1909, book 8, page 155; 5 December 1911, book 8, page 289; field inspection by Clayton Fraser, 14 November 1989.

INVENTORIED BY
Clayton B. Fraser and Sheila Bricher-Wade

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Flood Creek Bridge
NDOR: C006604305P

OTOE10

DATE(S) OF CONSTRUCTION
1901

LOCATION
county road over Flood Creek; S10, T9N, R12E
7.1 miles northwest of Dunbar; Otoe County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 41)

CONDITION

OWNER
Otoe County

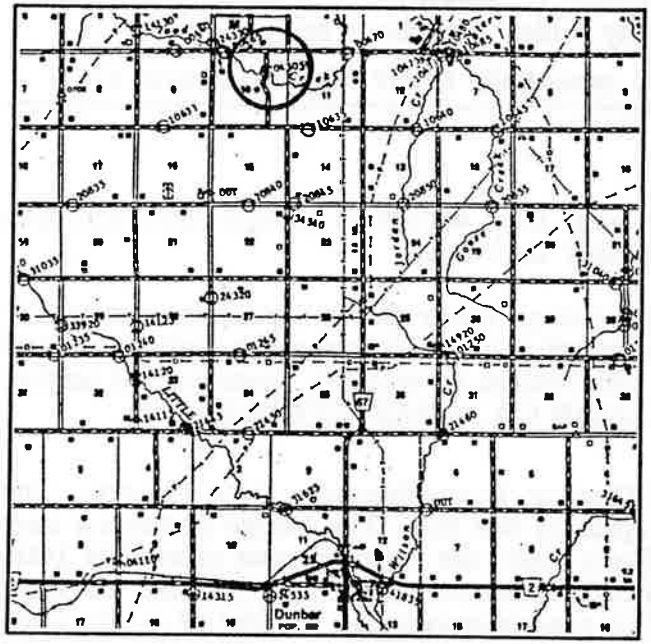
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt half-hip pony truss with steel stringer approach span
span length:	45.0'	substructure:	steel pile bent piers and abutments with timber backwalls
total length:	63.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	13.7'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 punched rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 looped rectangular eyebars; lateral bracing: round bar; floor beam: I-beam field bolted to vertical; guardrail: 2 angles; bridge plate: 1901 BUILT BY JOHN GILLIGAN CO. FALLS CITY NEBR.

This bridge carries a gravel-surfaced road across Flood Creek seven miles northwest of Dunbar, in northeastern Otoe County. The structure is a single-span, pinned Pratt half-hip pony truss with a steel stringer approach span on one end. The bridge features a steel pile bent pier and abutments, and appears to be largely unaltered. As indicated by a builder's plate, the structure was erected in 1901 by the John Gilligan Company of Falls City, Nebraska. Otoe County records do not specifically reference this bridge, but they do show that Gilligan received the county's annual bridge building contracts in 1900 and 1901. This span is among the handful of in situ Otoe County structures attributable to Gilligan.

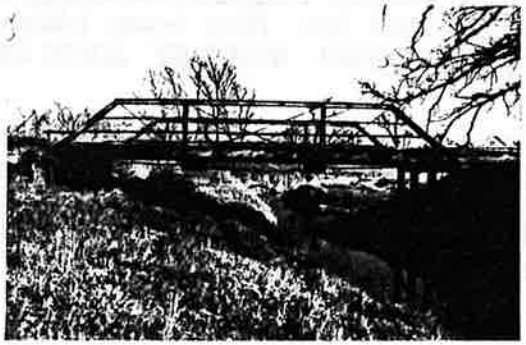
Marketed extensively by virtually all of the in-state bridge contractors and promoted in the form of standardized designs by the Nebraska State Engineer's office, the pinned Pratt pony truss was used widely by Nebraska's counties to carry roads over the state's myriad small streams. Thousands of such small-scale trusses were erected across the state in the late 19th and early 20th centuries, and many remain today. The Flood Creek Bridge is noteworthy as one of the earliest examples remaining in the state of this common structural type.

NAME(S) OF STRUCTURE
Flood Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006604305P; builder's plate; Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006602530; Proceedings of the Otoe County Commissioners, on file in Otoe County Courthouse, Nebraska City, Nebraska, refer to the following entries in book 6: 4 January 1900, page 388; 9 February 1900, page 402; 9 January 1901, page 508; 5 February 1901, page 515; field inspection by Clayton Fraser, 14 November 1989.

INVENTORIED BY
Clayton B. Fraser and Sheila Bricher-Wade

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Fox Creek Bridge
NDOR: C006605105

OTOE11

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over Fox Creek; S19/20. T8N, R13E
2.4 miles southeast of Dunbar; Otoe County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 22)

CONDITION

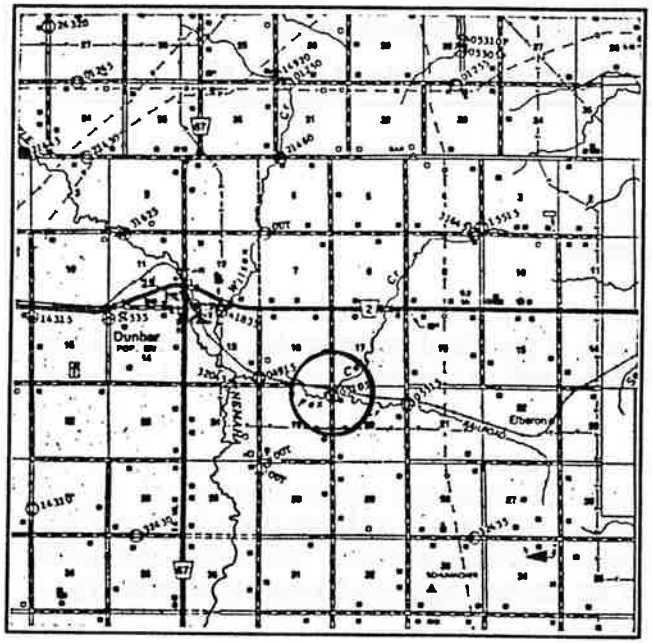
OWNER
Otoe County

span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt pony truss
span length:	60.0'	substructure:	steel pile bent abutments with timber wingwalls
total length:	61.0'	floor/decking:	timber decking over steel stringers
roadway wdt.:	17.5'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 angles with batten plates; vertical: 4 angels with lacing; diagonal: 2 punched rectangular eyebars; lateral bracing: round bar; floor beam: I-beam field bolted to vertical; guardrail: lattice

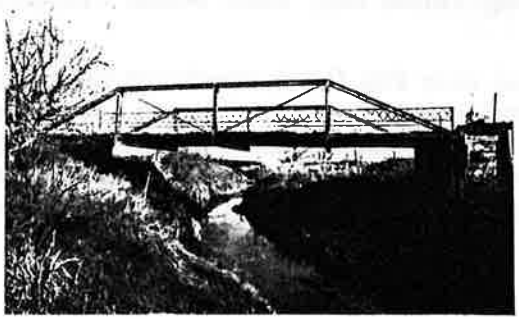
This small-scale bridge carries a secondary county road over Fox Creek southeast of Dunbar. The bridge consists of a three-panel, half-hip pin-connected Pratt pony truss, flanked by a steel stringer approach span on either end. The bridge appears in good physical condition, and has had no major alterations. Based on its dimensions and design attributes, this truss appears to have been built ca.1910, during a period in which Tecumseh contractor H.T. Ward held Otoe County's annual bridge construction contracts. With its construction history largely undocumented, the Hooper Creek Bridge is a typically configured example of an exceedingly common structural type.

NAME(S) OF STRUCTURE
Fox Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006605105; Proceedings of the Otoe County Commissioners, on file in the Otoe County Courthouse, Nebraska City, Nebraska, refer to the following entries: 4 April 1905, book 7, page 358; 9 January 1907, book 7, page 563; 4 November 1908, book 8, page 69; April 1909, book 8, page 106; December 1909, book 8, page 155; April 1911, book 8, page 247; 10 February 1914, book 9, page 18; 17 February 1915, book 9, page 120; field inspection by Clayton Fraser, 14 November 1989.

INVENTORIED BY
Clayton B. Fraser and Sheila Bricher-Wade

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Wolf Creek Bridge
NDOR: C006610270

OTOE12

DATE(S) OF CONSTRUCTION
1889

LOCATION
vacated county road over Wolf Creek; S2, T9N, R13E
10.3 miles northeast of Dunbar; Otoe County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / closed

RATING potentially NRHP eligible (score: 48)

CONDITION
fair

OWNER
Otoe County

span number:	1	superstructure:	wrought iron, 4-panel, pin-connected Pratt through truss
span length:	76.0'	substructure:	steel pile bent abutments
total length:	77.0'	floor/decking:	timber decking over steel stringers
roadway wdt.:	13.3'	other features:	upper chord: 2 channels with lacing; lower chord: 2 square looped eyebars; vertical: 4 angles with lacing; diagonal: 2 looped rectangular eyebars; counter: 2 looped round eyebars; lateral bracing: round bar with threaded ends; strut: 4 angles with lacing; floor beam: tapered "fishtail" plate girder, field bolted to vertical below lower chord; guardrail: 2 channels

In January 1889 the Otoe County Board of Supervisors allocated some $20,000 for bridge construction for the year. They advertised for competitive bids for "price per foot, pile bridges 10 to 20 and 20 to 30 feet, price per foot for combination Iron and pile bridges from 30 to 100 feet in length and price per foot for all approaches." That March the board contracted with M.D. Campbell and Thomas J. Crummel of Auburn, Nebraska, for these spans and throughout the year issued warrants for small-scale bridge work. What the records do not indicate, however, is the erection of this pinned through truss. Dated 1889 from a now-missing builder's plate, it was likely erected in the county (though evidently not at this location) by the King Iron Bridge Company, which erected all-iron trusses for the county outside of the provisions of the annual contracts. Configured as a four-panel, pinned Pratt through truss, the structure displays features such as the fishtail floor beams, peculiar upper chords connections and "sideways" endposts and upper chords, that were soon thereafter rendered anachronistic. The wood deck has largely been removed from the Wolf Creek Bridge and the structure is abandoned, but the truss remains intact.

In Nebraska, the pinned Pratt through truss was the bridge of choice for short- and medium-span applications in the late 19th and early 20th centuries. Most of the structures erected during this period were based on standard plans developed either by the state engineer's office or by the individual bridge companies. As a result, hundreds of Pratts were built across the state, all essentially identical, and today the Pratt truss constitutes the most populous group of through trusses. The Wolf Creek Bridge is not like any other truss in Nebraska, however, with its 1880s detailing and configuration. This bridge is technologically significant as the earliest Pratt through truss remaining in the state. The loss of locational integrity associated with the truss's move and the loss of fabric in the removal of its deck are mitigated by the relative importance of this bridge to the history of Nebraska bridge building.

NAME(S) OF STRUCTURE
Wolf Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION

LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006610270; Proceedings of the Otoe County Commissioners, on file in the Otoe County Courthouse, Nebraska City, Nebraska, refer to the following entries: 7 May 1888, book 4, page 418; July 1888, book 4, page 432; January 1889, book 4, page 471-472; 4 March 1889, book 4, page 501; January 1890, book 4, page 590; March 1891, book 5, page 74; 11 April 1893, book 5, page 275; 6 February 1894, book 5, page 352; field inspection by Clayton Fraser and Sheila Bricher-Wade, 14 November 1989.

INVENTORIED BY
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AFFILIATION
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Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Little Nemaha River Bridge
NDOR: C006611330

OTOE13

DATE(S) OF CONSTRUCTION
ca.1905

LOCATION
county road over the Little Nemaha River; S6, T8N, R10E
2.2 miles east of Palmyra; Otoe County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 23)

CONDITION

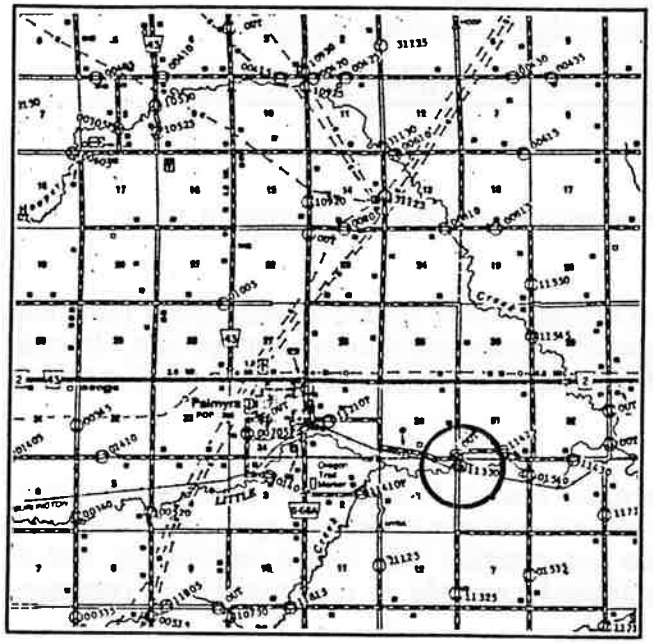
OWNER
Otoe County

span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt pony truss with steel stringer approach spans
span length:	60.0'	substructure:	steel pile bent abutments and pier
total length:	103.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	13.0'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 rectangular punched eyebars; vertical: 4 angles with lacing; diagonal: 2 punched rectangular eyebars; lateral bracing: round bar; floor beam: I-beam field bolted to vertical; guardrail: 2 angles; outriders at center panel point

This bridge carries a gravel-surfaced county road across the Little Nemaha River about two miles east of Palmyra in northwestern Otoe County. The span is a typically configured four-panel, pinned Pratt pony truss, flanked by a steel stringer approach span on either end and resting on steel pile bent abutments and piers. Otoe County Commissioners' records do not mention this bridge specifically, but it appears to have been erected ca.1905. The Little Nemaha River Bridge is a typically configured example of an exceedingly common structural type.

NAME(S) OF STRUCTURE
Little Nemaha River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006611330; Proceedings of the Otoe County Commissioners, on file in Otoe County Courthouse, Nebraska City, Nebraska, refer to the following entries: 4 March 1897, book 6, page 63; 8 March 1898, book 6, page 166; 7 March 1899, book 6, page 300; 9 February 1900, book 6, page 402; 5 February 1901, book 6, page 515; 19 February 1902, book 6, page 630; 9 April 1903, book 7, page 110; field inspection by Clayton Fraser and Sheila Bricher-Wade, 14 November 1989.

INVENTORIED BY
Clayton B. Fraser and Sheila Bricher-Wade

AFFILIATION
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Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Muddy Creek Bridge
NDOR: C006612105

OTOE14

DATE(S) OF CONSTRUCTION
1906

LOCATION
county road over Muddy Creek; S10/11, T7N, R10E
7.0 miles southwest of Syracuse; Otoe County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 33)

CONDITION
good

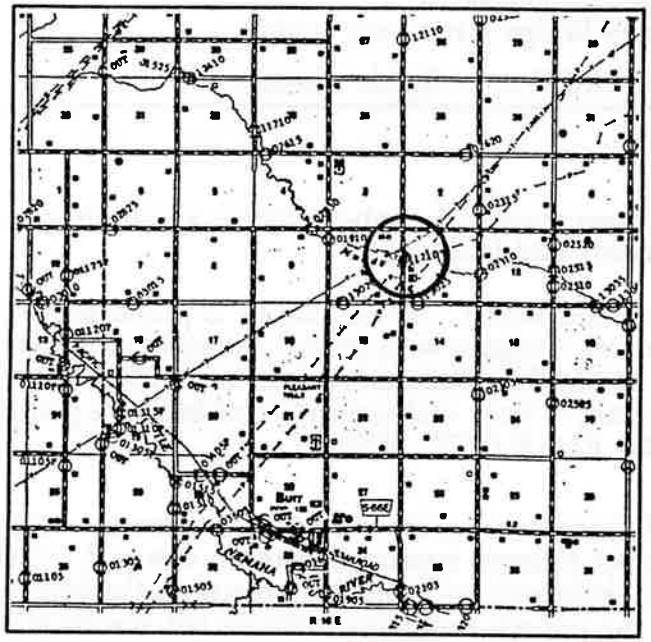
OWNER
Otoe County

span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt half-hip pony truss with timber stringer approach span
span length:	50.0'	substructure:	steel cylinder piers with timber pile abutments and backwalls
total length:	83.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	13.6'	other features:	upper chord: 2 channels with cover plates and lacing; lower chord: 2 round looped eyebars; 2 looped rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 looped rectangular eyebars; 1 square eyebar with turnbuckle; lateral bracing: round bar; floor beam: I-beam field bolted to vertical; guardrail: lattice; endpost-mounted builder's plate: 1906 BUILT BY THE JOHN GILLIGAN CO FALLS CITY NEB

This bridge carries an unpaved county road across Muddy Creek seven miles southwest of Syracuse in southwestern Otoe County. The steel span is a typically configured three-panel, pinned Pratt half-hip pony truss with a timber stringer approach span on one end. The bridge rests on concrete-filled steel cylinder piers, and appears to be largely unaltered. As indicated by a builder's plate on the bridge itself, the truss was erected in 1906 by John Gilligan of Falls City, Nebraska. Minutes of the County Commissioners do not specifically reference the bridge, but they do show that Gilligan received annual bridge building contracts in Otoe County in 1900, 1901, and 1905 and 1907. Although erected in 1906, as evidenced by the plate, this span was likely among those built by Gilligan as part of the 1905 contract. Since its construction, the span has served to carry vehicular traffic in its original location. It is among the handful of remaining in situ Otoe County structures attributable to Gilligan.

NAME(S) OF STRUCTURE
Muddy Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006612105; builder's plaque; Proceedings of the Otoe County Commissioners, on file in Otoe County Courthouse, Nebraska City, Nebraska, refer to the following entries: 4 January 1900, book 6, page 388; 9 February 1900, book 6, page 402; 9 January 1901, book 6, page 508; 5 February 1901, book 6, page 515; 21 February 1905, book 7, page 343; 4 April 1905, book 7, page 358; 14 December 1906, book 7 page 548; 9 January 1907, book 7, page 563; field inspection by Clayton Fraser, 14 November 1989.

INVENTORIED BY
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AFFILIATION
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Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Muddy Creek Bridge
NDOR: C006613035

OTOE15

DATE(S) OF CONSTRUCTION
ca.1905

LOCATION
county road over Muddy Creek; S7/18, T7N, R11E
6.0 miles south of Syracuse; Otoe County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 19)

CONDITION
good

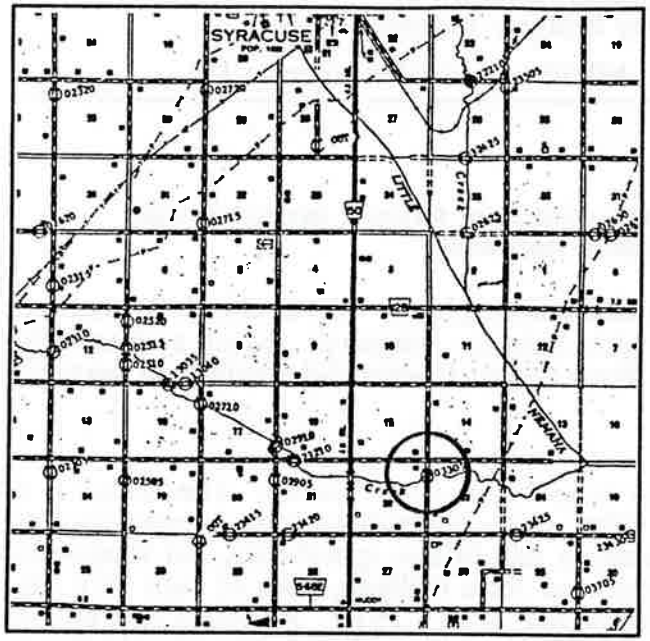
OWNER
Otoe County

span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt pony truss with steel stringer approach span
span length:	50.0'	substructure:	steel pile bent abutments and piers with timber backwalls
total length:	83.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	13.6'	other features:	upper chord: 2 channels with cover plates and batten plates; lower chord: 2 punched rectangular eyebars; vertical: 4 angles with lacing; diagonal: round eyebar with turnbuckles; lateral bracing: round bar; floor beam: I-beam field bolted to vertical; guardrail: 2 angles

This bridge carries a secondary county road over Muddy Creek six miles south of Syracuse in southern Otoe County. The bridge is a simple, three-panel, pin-connected Pratt pony truss with a steel stringer approach span on either end. The substructure is comprised of steel pile bent abutments and piers with timber backwalls. Otoe County records do not mention this bridge specifically, but it appears to have been built ca.1910. H.T. Ward of Tecumseh NE, the Monarch Engineering Company, and John Gilligan, both of Falls City NE, and John W. Towle of Omaha, were the most active Otoe County bridge builders during the period 1900 - 1910. Although this bridge likely represents the work of one of these firms, it is not possible to attribute its construction to a specific builder. The Muddy Creek Bridge is a typically configured example of an exceedingly common structural type.

NAME(S) OF STRUCTURE
Muddy Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006613035; Proceedings of the Otoe County Commissioners, on file in the Otoe County Courthouse, Nebraska City, Nebraska, refer to the following entries: 4 January 1900, book 6, page 388; 9 February 1900, book 6, page 402; 9 January 1901, book 6, page 508; 5 February 1901, book 6, page 515; 22 January 1902, book 6, page 622; 19 February 1902, book 6, page 630; 9 April 1903, book 7, page 110;, 4 April 1905, book 7, page 358; March 1908, book 8, page 32; February 1909, book 8, page 96; April 1909, book 8, page 106; December 1909, book 8, page 155; field inspection by Clayton Fraser, 14 November 1989.

INVENTORIED BY
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AFFILIATION
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Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Little Nemaha River Bridge
NDOR: C006614120

OTOE16

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over the Little Nemaha River; S32/33, T9N, R12E
4.0 miles northwest of Dunbar; Otoe County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 22)

CONDITION
good

OWNER
Otoe County

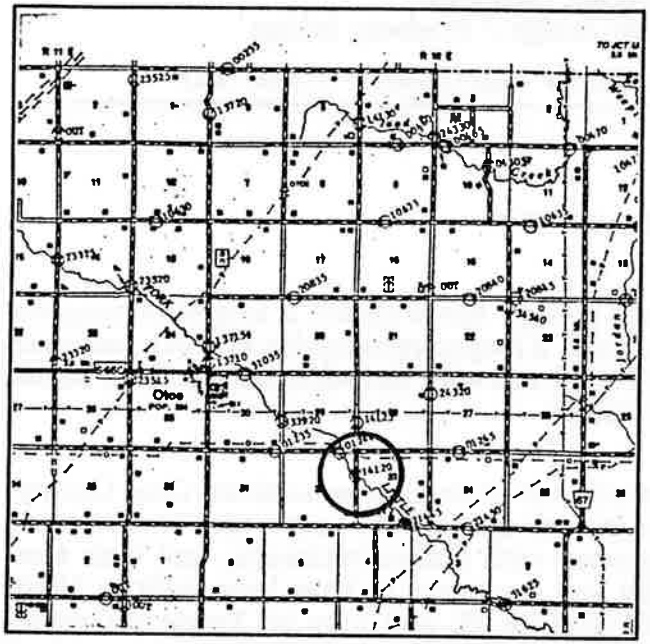
span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt half-hip pony truss
span length:	60.0'	substructure:	steel pile bent piers and abutments
total length:	113.0'	floor/decking:	timber decking over steel stringers
roadway wdt.:	13.7'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 looped rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 looped rectangular eyebars; counter: 1 eyerod with turnbuckle; lateral bracing: round rod with threaded rends; floor beam: I-beam, field bolted to vertical; guardrail: lattice

This bridge carries a gravel-surfaced county road across the Little Nemaha River four miles northwest of Dunbar in northern Otoe County. The span features a four-panel, pinned Pratt half-hip pony truss flanked by a steel stringer approach span on the south end, and a timber stringer approach on the north end. The substructure is comprised of steel pile bent abutments with timber backwalls, and both steel pile, and timber pile bent piers. Otoe County records do not mention this bridge specifically, but it appears to have been built ca.1910. H.T. Ward of Tecumseh NE, the Monarch Engineering Company, and John Gilligan, both of Falls City NE, and John W. Towle of Omaha, were the most active Otoe County bridge builders during the period 1900 - 1910. Although this bridge likely represents the work of one of these firms, it is not possible to attribute its construction to a specific builder. The Muddy Creek Bridge is a typically configured example of an exceedingly common structural type.

NAME(S) OF STRUCTURE

Little Nemaha River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006614120; Proceedings of the Otoe County Commissioners, on file in the Otoe County Courthouse, Nebraska City, Nebraska, refer to the following entries: 4 January 1900, book 6, page 388; 9 February 1900, book 6, page 402; 9 January 1901, book 6, page 508; 5 February 1901, book 6, page 515; 22 January 1902, book 6, page 622; 19 February 1902, book 6, page 630; 9 April 1903, book 7, page 110;, 4 April 1905, book 7, page 358; March 1908, book 8, page 32; February 1909, book 8, page 96; April 1909, book 8, page 106; December 1909, book 8, page 155; field inspection by Clayton Fraser, 14 November 1989.

INVENTORIED BY

Clayton B. Fraser and Sheila Bricher-Wade

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Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Wilson Creek Bridge
NDOR: C006614920

OTOE17

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over Wilson Creek; S30, T9N, R13E
3.5 miles northeast of Dunbar; Otoe County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 19)

CONDITION
fair

OWNER
Otoe County

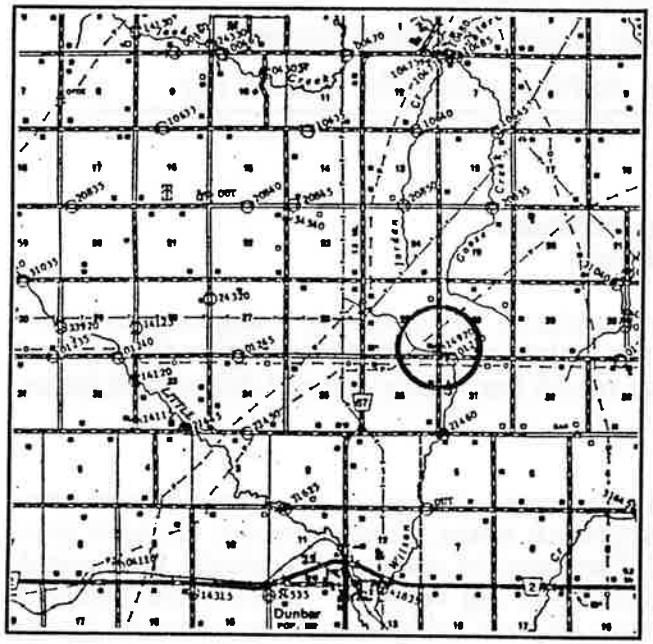
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt truss leg bedstead
span length:	40.0'	substructure:	steel pile bent abutments with timber backwalls
total length:	41.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	13.8'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 angles with batten plates; 2 looped rectangular eyebars; vertical:4 angles with lacing; diagonal: 2 rectangular looped eyebars; lateral bracing: round bar; floor beam: I-beam field bolted to vertical; guardrail: 1 angle

This bridge carries an unpaved county road over Wilson Creek three and one-half miles northeast of Dunbar, in northwestern Otoe County. The bridge consists of a three-panel, pin-connected truss-leg bedstead, with no approach spans. The structure displays good historical integrity; it appears in good physical condition, and has had no major alterations. The span, in general, is typically configured, but is somewhat unusual in that it displays gusset plates at the intersection of the top chord and hip vertical. Three other similarly configured bridges (**OTOE02, OTOE12** and **OTOE24**) also have gusset plates. It is likely that all four bridges were constructed by the same contractor, perhaps under the terms of a multiple or annual bridge contract. Unfortunately no mention of these bridges was found in the Otoe County Commissioner's minutes, but based on their pin-connected technology and physical condition, they appear to date from circa 1910. H.T. Ward, John Gilligan, Monarch Construction Company, and Kimballton Construction Company were the most active Otoe County bridge builders during the period 1905 - 1910. Although the four bridges probably represent the work of one of these firms, it is not possible to attribute their construction to a specific builder.

Once relatively common in Nebraska, bedsteads have all but disappeared from the state's secondary roads over time. This small-scale structure is a typically configured bedstead, but its lack of documentation and loss of locational integrity associated with a later move tend to limit its interpretive value.

NAME(S) OF STRUCTURE
Wilson Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006614920; Proceedings of the Otoe County Commissioners, on file in the Otoe County Courthouse, Nebraska City, Nebraska, refer to the following entries: 4 April 1905, book 7, page 358; 9 January 1907, book 7, page 563; 4 November 1908, book 8, page 69; April 1909, book 8, page 106; December 1909, book 8, page 155; April 1911, book 8, page 247; 10 February 1914, book 9, page 18; 17 February 1915, book 9, page 120; field inspection by Clayton Fraser, 14 November 1989.

INVENTORIED BY
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AFFILIATION
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Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Wyoming Bridge
NDOR: C006616140

OTOE18

DATE(S) OF CONSTRUCTION
1878 (?)

LOCATION
county road over Squaw Creek; S18, T9N, R14E
9.1 miles northeast of Dunbar; Otoe County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 54)

CONDITION
fair

OWNER
Otoe County

span number:	1	superstructure:	steel, 8-panel, bowstring pony arch-truss with timber stringer approach spans
span length:	80.0'	substructure:	steel bile bent abutments and pier with timber backwalls
total length:	97.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	14.0'	other features:	upper chord: 2 curved channels with continuous plates; lower chord: 2 rectangular punched eyebars continuous through the panel points; vertical: round bar with threaded ends, 2 T-sections with lacing; diagonal: round bar with threaded ends; lateral bracing: round bar with threaded ends; floor beam: I-beam, clamped to lower chord eyebars at vertical; guardrail: timber; outriders: T-sections with lacing; bridge plate: **KING IRON BRIDGE & MAC. CO. CLEVELAND O. Z. KING PAT JULY 30 1866**

Located in northeastern Otoe County, this wrought iron bowstring arch-truss carries a gravel-surfaced county road across Squaw Creek near its confluence with the Missouri River. County records do not mention this bridge specifically, but they do indicate an extended relationship with the bridge's fabricator, the King Iron Bridge Company. Otoe County first contracted with huge Ohio-based bridge firm in June 1876 (although King may have fabricated earlier spans in the county for other contractors), when the supervisors ordered three small-scale iron bridges. Otoe County purchased bridges from King throughout the 1880s, although the records are vague about specific structures. In 1886, for example, the county estimated $16,000 worth of bridges ordered from King. King sued the county soon thereafter and in 1888 won a sizeable settlement in the U.S. Circuit Court. To defray the expenses in its King Iron Bridge Judgement Fund, the county initiated a special 1.5 mill levy that year. Otoe County stretched its payments to King until 1891 and ordered at least one more superstructure (OTOE12) from the contractor, but the two soon ceased doing business. Although the records are inconclusive, it seems likely that this truss was one of three ordered from King in July 1878. The bridge has evidently been moved to its current location over Squaw Creek near the small town of Wyoming.

Marketed widely throughout the Midwest by such industry giants as the King Iron Bridge Company and the Wrought Iron Bridge Company, bowstring arch-trusses were the mainstay bridge type for medium-span roadway crossings in the 1870s, 1880s and early 1890s. Several bowstrings were erected in eastern Nebraska during that period, but through subsequent attrition only a handful remains today. Most of these were erected by King. The Wyoming Bridge is significant as a well-preserved, early example of a King bowstring: one of the last surviving trusses of its type remaining in Nebraska.

NAME(S) OF STRUCTURE
Wyoming Bridge

PHOTOS AND SKETCH MAP OF LOCATION

LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006616140; Proceedings of the Otoe County Commissioners, on file in the Otoe County Courthouse, Nebraska City, Nebraska, refer to the following entries: 19 June 1876, book 2, page 487; 3 July 1876, book 2, page 493-494; 1 July 1878, book 3, page 19; field inspection by Clayton Fraser and Sheila Bricher-Wade, 14 September 1989.

INVENTORIED BY
Clayton B. Fraser and Sheila Bricher-Wade

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Little Nemaha River Bridge OTOE19
NDOR: C006621445

DATE(S) OF CONSTRUCTION
1911

LOCATION
county road over the Little Nemaha River; S33, T8N, R12E
3.0 miles northwest of Dunbar; Otoe County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 32)

CONDITION
good

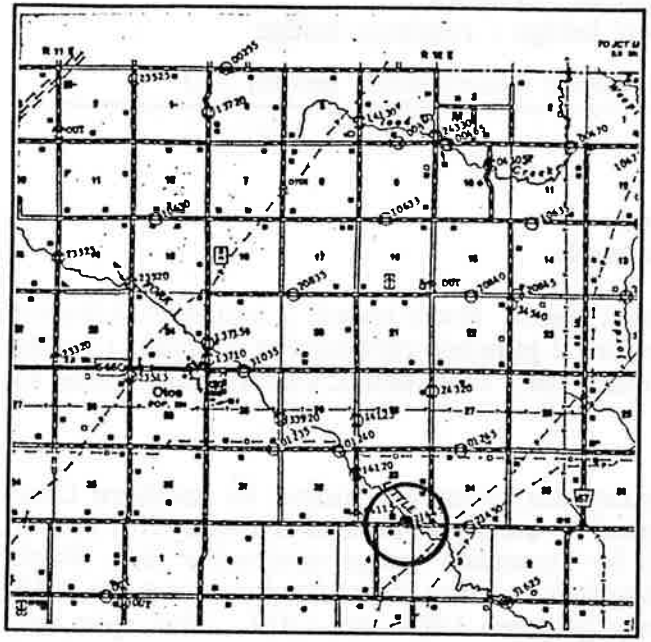
OWNER
Otoe County

span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt pony truss
span length:	70.0'	substructure:	steel pile bent abutments with timber back walls
total length:	71.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	13.6'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 angles with batten plates; vertical: 4 angles with lacing; diagonal: 2 punched rectangular eyebars; 1 round eyebar with turnbuckle; lateral bracing: round bar; floor beam: I-beam field bolted to vertical: guardrail: lattice

This bridge carries a gravel-surfaced county road across the Little Nemaha River three miles northwest of Dunbar in northern Otoe County. The steel span is a typically configured four-panel, pinned Pratt pony truss, supported by steel pile bent abutments with timber backwalls. As indicated by a now-removed builder's plate, this truss was erected in 1911 by Tecumseh bridge contractor H.T. Ward. Records of the Otoe County Commissioners do not reference a bridge at this location, but they indicate that the annual contract for 1911 was held by Ward. Ward held annual or multiple bridge building contracts in Otoe County between 1909 and 1911. This span and another identical truss (**OTOE20**) were both erected by Ward as part of the same contract. As a 70-foot pinned Pratt pony span erected in 1911, the Little Nemaha River Bridge fits well within the mainstream of bridge construction trends for the period. It is a well-preserved, but undistinguished example of a common structural type.

NAME(S) OF STRUCTURE
Little Nemaha River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006621445; Proceedings of the Otoe County Commissioners, on file in the Otoe County Courthouse, Nebraska City, Nebraska, refer to the following entries: April 1909, book 8, page 106; December 1909, book 8, page 155; April 1911, book 8, page 247; 5 December 1911, book 8, page 289; field inspection by Clayton Fraser, 14 November 1989.

INVENTORIED BY
Clayton B. Fraser and Sheila Bricher-Wade

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Wilson Creek Bridge
NDOR: C006621460

OTOE20

DATE(S) OF CONSTRUCTION
1911

LOCATION
county road over Wilson Creek; S6, T8N, R13E
2.5 miles northeast of Dunbar; Otoe County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 34)

CONDITION
good

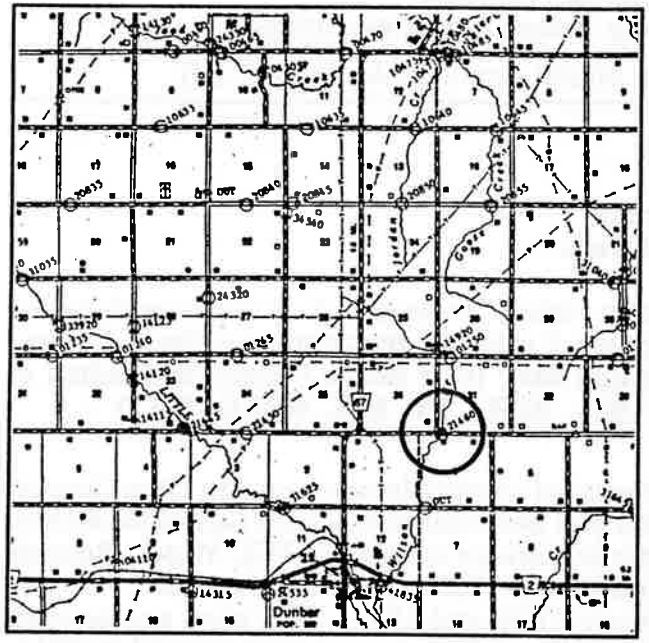
OWNER
Otoe County

span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt pony truss
span length:	64.0'	substructure:	steel pile bent abutments with timber backwalls
total length:	65.0'	floor/decking:	timber decking over steel stringers
roadway wdt.:	13.7'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 angles with batten plates; vertical: 4 angles with lacing; diagonal: 2 punched rectangular eyebars; 1 round eyebar with turnbuckle; lateral bracing: round bar; floor beam: I-beam field bolted to vertical; guardrail: lattice; bridge plate: **1911 BUILT BY M.T. WARD & CO**

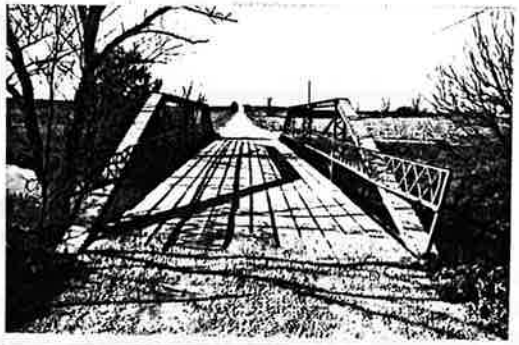
This bridge carries an unpaved county road across Wilson Creek two and one-half miles northeast of Dunbar in northeastern Otoe County. The steel span is a typically configured four-panel, pinned Pratt pony truss, supported by steel pile bent abutments with timber backwalls. As indicated by a builder's plate on the truss itself, this bridge was erected in 1911 by Tecumseh bridge contractor H.T. Ward. Records of the Otoe County Commissioners do not reference a bridge at this location, but they indicate that the annual contract for 1911 was held by Ward. Ward held annual or multiple bridge building contracts in Otoe County between 1909 and 1911. This span and another identical truss (**OTOE19**) were both erected by Ward as part of the same contract. As a 70-foot pinned Pratt pony span erected in 1911, the Wilson Creek Bridge fits well within the mainstream of bridge construction trends for the period. It is a well-preserved, but undistinguished example of a common structural type.

NAME(S) OF STRUCTURE
Wilson Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006621460; builder's plate; Proceedings of the Otoe County Commissioners, on file in the Otoe County Courthouse, Nebraska City, Nebraska, refer to the following entries: April 1909, book 8, page 106; December 1909, book 8, page 155; April 1911, book 8, page 247; 5 December 1911, book 8, page 289; field inspection by Clayton Fraser, 14 November 1989.

INVENTORIED BY
Clayton B. Fraser and Sheila Bricher-Wade

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Little Nemaha River Bridge OTOE21
NDOR: C006622025

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
county road over the Little Nemaha River; S17/20, T8N, R11E
1.3 miles west of Syracuse; Otoe County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 24)

CONDITION
good

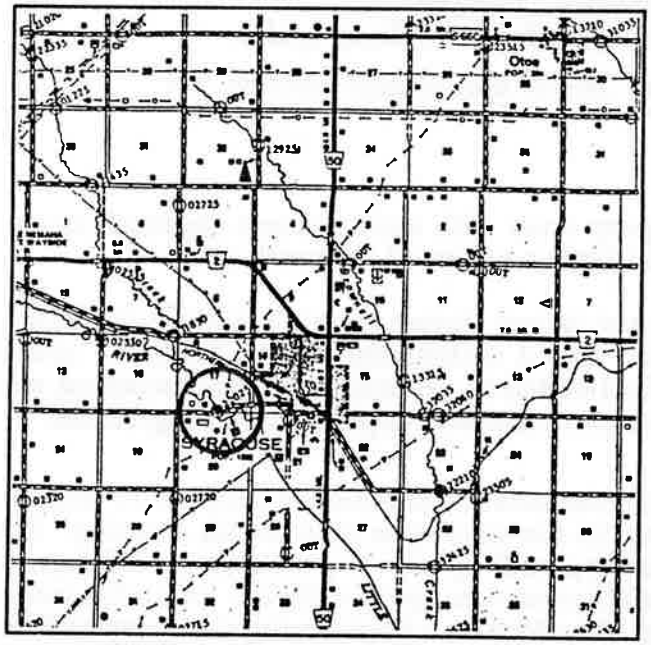
OWNER
Otoe County

span number:	1	superstructure:	steel, 5-panel, pin/rigid-connected Pratt pony truss with steel stringer approach spans
span length:	90.0'	substructure:	steel pile bent piers and timber backwalls; timber wingwall on north side
total length:	198.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	13.0'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 angles with lacing; vertical: 4 angles with lacing; diagonal: 1 and 2 rectangular looped eyebars; lateral bracing: round bar; floor beam: I-beam field bolted to vertical; guardrail: lattice on east side with Armco at approaches; Armco on west side and approaches; swag braces

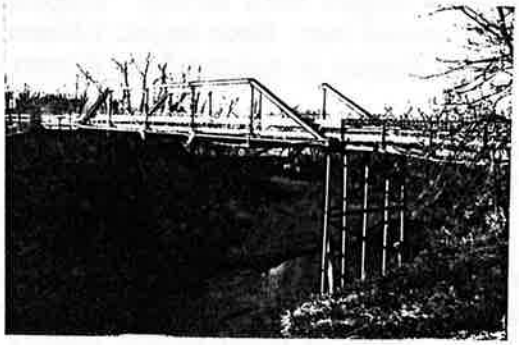
On May 3, 1870, the Otoe County Commissioners resolved to build a bridge over the Little Nemaha River between sections 17 and 20, T8N, R11E. Located just over a mile west of Syracuse, the 1870 structure was a precursor to the steel span now at this crossing. The current bridge consists of a five-panel, pinned Pratt pony truss, with flanking steel stringer approach spans. It possesses good integrity, appearing unaltered and in good physical condition. Otoe County records do not mention this structure specifically but its configuration indicates that the truss was erected ca.1915 using a standard design of the state engineer. The Monarch Engineering Company of Falls City, Nebraska, built most steel bridges in Otoe County between 1913 and 1917. During these years Monarch was awarded several multiple bridge contracts, and may have built this span. With its construction history largely undocumented the Little Nemaha River Bridge lacks any appreciable degree of historical or technological significance.

NAME(S) OF STRUCTURE
Little Nemaha River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006622025; Proceedings of the Otoe County Commissioners, on file in the Otoe County Courthouse, Nebraska City, Nebraska, refer to the following entries: 3 May 1870, book 1, page 495; April 1909, book 8, page 106; December 1909, book 8, page 155; April 1911, book 8, page 247; 5 December 1911, book 8, page 289; 10 February 1914, book 9, page 18; 17 February 1915, book 9, page 120; field inspection by Clayton Fraser and Sheila Bricher-Wade, 14 November 1989.

INVENTORIED BY
Clayton B. Fraser and Sheila Bricher-Wade

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C006622030

OTOE22

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
county road over unnamed stream; S16, T8N, R11E
south edge of Syracuse; Otoe County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 15)

CONDITION
fair

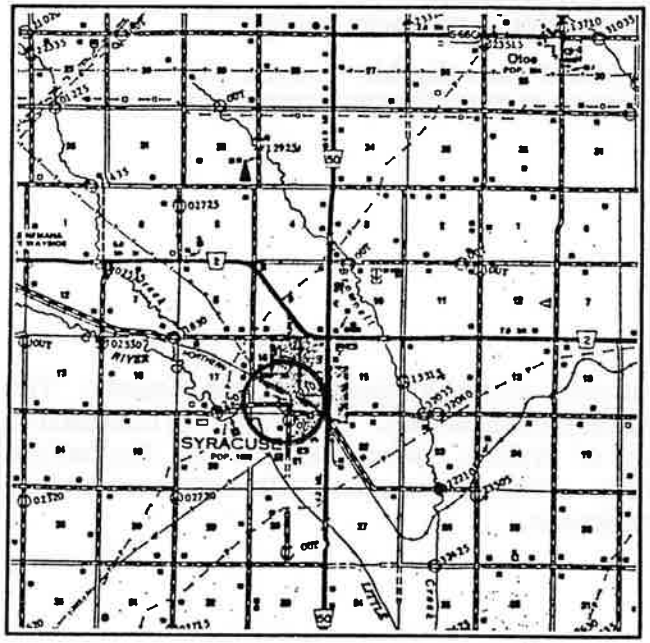
OWNER
Otoe County

span number:	1	superstructure:	concrete filled spandrel arch
span length:	27.0'	substructure:	concrete abutments and wingwalls
total length:	35.0'	floor/decking:	gravel over earth fill
roadway wdt.:	13.7'	other features:	original concrete parapet walls removed

The construction history for this small-scale filled spandrel concrete arch is obscure, due to poor record-keeping by Otoe County. The structure appears to have been built ca.1915, during a period in which Otoe County built several similar arches. Two concrete contractors were active in the county during this period: the Wilson Re-enforced Concrete Company of Wahoo, Nebraska, and the Kimballton Construction Company of Kimballton, Iowa. This bridge may have been built by either firm. With its parapet walls removed and its history largely undocumented, this bridge lacks any appreciable degree of integrity or significance.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006622030; field inspection by Clayton Fraser, 14 November 1989.

INVENTORIED BY
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AFFILIATION
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Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Brownell Creek Bridge
NDOR: C006622210

OTOE23

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over Brownell Creek; S23/24, T8N, R11E
2.1 miles southeast of Syracuse; Otoe County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 19)

CONDITION

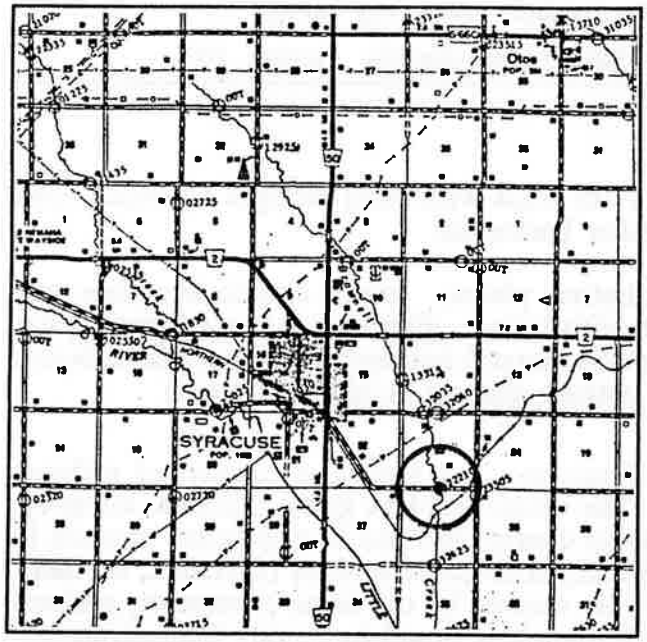
OWNER
Otoe County

span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt half-hip pony truss with steel stringer approach span
span length:	50.0'	substructure:	steel pile bent abutments and pier with timber backwalls
total length:	83.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	13.5'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 square and rectangle looped eyebars; vertical: 4 angles with lacing; diagonal: 2 looped rectangular eyebars; 1 looped square eyebar with turnbuckle; lateral bracing: round bar; floor beam: I-beam field bolted to vertical; guardrail: lattice; gussets at hip connection

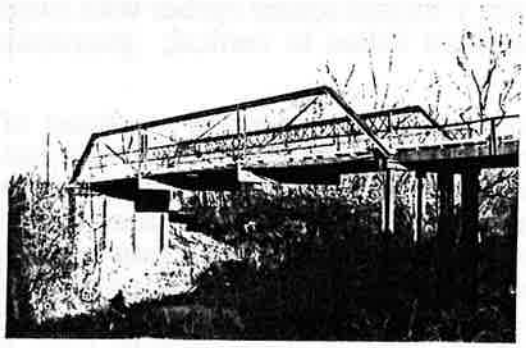
This bridge carries an unpaved county road over Brownell Creek two miles southeast of Syracuse. The structure consists of a three-panel, pinned Pratt half-hip pony truss, with a steel stringer approach span on the east end. The bridge displays good historical integrity; it appears in good physical condition, and has had no major alterations. The span is typically configured, but is somewhat unusual in that it has gusset plates at the intersection of the top chord and hip vertical. Three other similarly configured bridges (**OTOE02, OTOE11** and **OTOE17**) also have gusset plates at the same location. It is likely that all four bridges were erected by the same contractor, perhaps under the terms of a multiple or annual bridge contract. Unfortunately no mention of these bridges was found in County Commissioners' minutes, but based on their pin-connected technology and physical condition, they appear to date from circa 1910. H.T. Ward of Tecumseh, the Monarch Engineering Company, and John Gilligan, both of Falls City, NE, and Kimballton Construction Company of Kimballton IA, were the most active Otoe County bridge builders during the period 1905 - 1910. Although the four bridges probably represent the work of one of these firms, it is not possible to attribute their construction to a specific builder. The Brownell Creek Bridge is a typical example of an exceedingly common structural type in Nebraska.

NAME(S) OF STRUCTURE
Brownell Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006622210; Proceedings of the Otoe County Commissioners, on file in the Otoe County Courthouse, Nebraska City, Nebraska, refer to the following entries: 4 April 1905, book 7, page 358; 9 January 1907, book 7, page 563; 4 November 1908, book 8, page 69; April 1909, book 8, page 106; December 1909, book 8, page 155; April 1911, book 8, page 247; 10 February 1914, book 9, page 18; 17 February 1915, book 9, page 120; field inspection by Clayton Fraser, 14 November 1989.

INVENTORIED BY
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AFFILIATION
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Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Little Nemaha River Bridge
NDOR: C006623055

OTOE24

DATE(S) OF CONSTRUCTION
1895 (?)

LOCATION
county road over the Little Nemaha River; S12/13, T7N, R12E
1.1 miles south of Lorton; Otoe County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 23)

CONDITION
good

OWNER
Otoe County

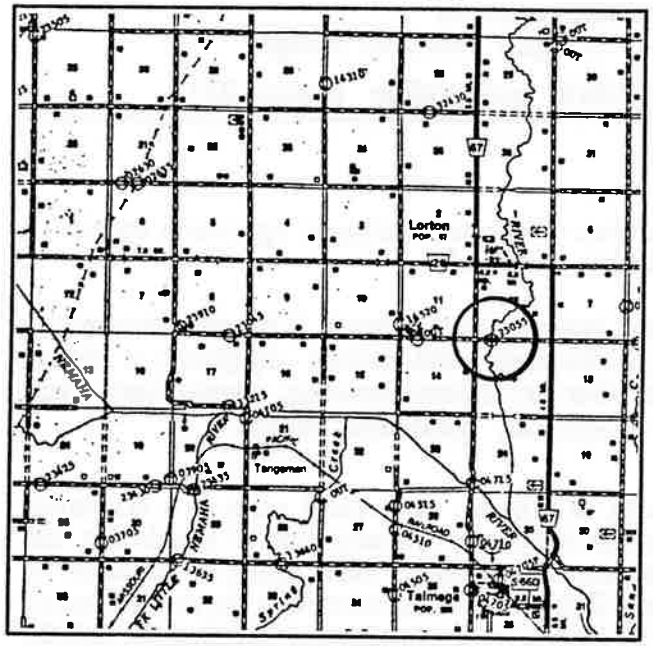
span number: 1
span length: 100.0'
total length: 172.0'
roadway wdt.: 14.0'

superstructure: steel, 6-panel, pin-connected Pratt through truss with steel stringer approach spans
substructure: steel pile bent abutments and piers with timber wingwalls
floor/decking: timber deck over steel stringers
other features: upper chord: 2 channels with cover plate and lacing; lower chord: 2 looped rectangular eyebars; vertical: 1 looped square eyebar; 2 channels with lacing; diagonal: 2 looped rectangular eyebars; 1 round eyebar with turnbuckle; lateral bracing; round bar; strut: 2 angles; floor beam: I-beam field bolted to vertical; guardrail: lattice

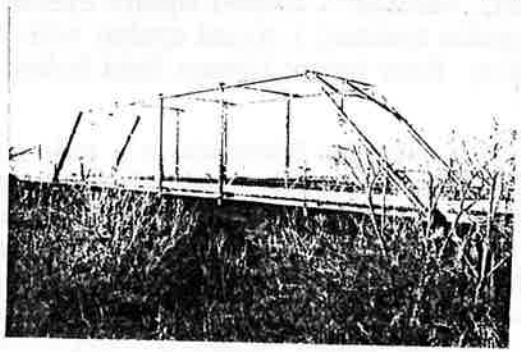
This bridge carries an unpaved county road over the Little Nemaha River about a mile south of Lorton. The steel span is a six-panel, pin-connected Pratt through truss with flanking steel stringer approach spans. Records in the Nebraska Department of Roads list this bridge's erection date as 1895. The bridge's appearance, physical condition, and pin-connected technology also seem to indicate an erection date of just prior to the turn of the century. Unfortunately, minutes of Otoe County Commissioners' meetings do not reference a bridge at this location, so it is not possible to confirm 1895 as the date of construction, or to identify the contractor. During the 1890s, the commissioners' minutes rarely noted the construction of specific bridges. In fact, the minute's references to bridge building were usually limited to noting the awarding of annual or multiple bridge contracts. Between 1888 and 1894 Otoe County awarded MD. Campbell and Thomas J. Crummel of Auburn, Nebraska several annual or multiple bridge building contracts. In the late 1890s, the Henderson Brothers of Savannah, Missouri dominated Otoe County bridge building, holding annual contracts between 1895-1899. Either Campbell and Crummel, or the Henderson Brothers, are probably responsible for the erection of this bridge, but unfortunately the evidence is not conclusive. With its construction history largely undocumented, this bridge can be considered no more than a typical example of a common structural type, without any special significance.

NAME(S) OF STRUCTURE
Little Nemaha River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006623055; Proceedings of the Otoe County Commissioners, on file in the Otoe County Courthouse, Nebraska City, Nebraska, refer to the following entries: 7 May 1888, book 4, page 418; July 1888, book 4, page 432; January 1889, book 4, page 471-472; 4 March 1889, book 4, page 501; January 1890, book 4, page 590; March 1891, book 5, page 74; 11 April 1893, book 5, page 275; 6 February 1894, book 5, page 352; 4 March 1897, book 6, page 63; 8 March 1898, book 6, page 166; 7 March 1899, book 6, page 300; field inspection by Clayton Fraser, 14 November 1989.

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AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Rock Creek Bridge
NDOR: C006623075

OTOE25

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over Rock Creek Bridge; S7/8, T7N, R14E
7.2 miles east of Lorton; Otoe County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 22)

CONDITION
fair

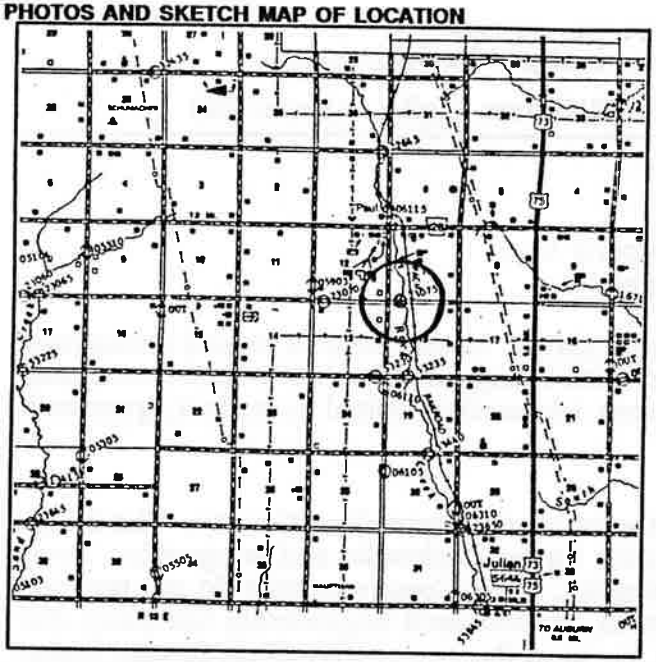
OWNER
Otoe County

span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt half-hip pony truss
span length:	60.0'	substructure:	steel pile bent abutments with timber wingwalls
total length:	60.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	15.6'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars; 2 round eyebars; vertical: 4 angles with lacing; diagonal: 2 looped rectangular eyebars; lateral bracing: round bar; floor beam: I-beam field bolted to vertical; guardrail: timber

This bridge carries a secondary county road over Rock Creek about seven miles east of Lorton in southeastern Otoe County. The bridge is a four-panel, pinned Pratt half-hip pony truss, supported by steel pile bent abutments with timber backwalls and wingwalls. Some sections of steel have been replaced over the years, compromising the bridge's structural integrity. Otoe County records do not mention this structure specifically, but it appears to have been erected ca.1910. H.T. Ward of Tecumseh, the Monarch Engineering Company, and John Gilligan, both of Falls City, NE, and Kimballton Construction Company of Kimballton IA, were the most active Otoe County bridge builders during the period 1905 - 1915. Although this bridge likely represents the work of one of these firms, it is not possible to attribute its construction to a specific builder. The Rock Creek Bridge possesses no superlative qualities.

NAME(S) OF STRUCTURE
Rock Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006623075; Proceedings of the Otoe County Commissioners, on file in the Otoe County Courthouse, Nebraska City, Nebraska, refer to the following entries: 4 April 1905, book 7, page 358; 9 January 1907, book 7, page 563; 4 November 1908, book 8, page 69; April 1909, book 8, page 106; December 1909, book 8, page 155; April 1911, book 8, page 247; 10 February 1914, book 9, page 18; 17 February 1915, book 9, page 120; field inspection by Clayton Fraser, 14 November 1989.

INVENTORIED BY
Clayton B. Fraser and Sheila Bricher-Wade

AFFILIATION
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Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Little Nemaha River Bridge OTOE26
NDOR: C006623435

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
county road over South Fork of Little Nemaha River; S20/29, T7N, R12E
4.4 miles northwest of Talmage; Otoe County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 16)

CONDITION
fair

OWNER
Otoe County

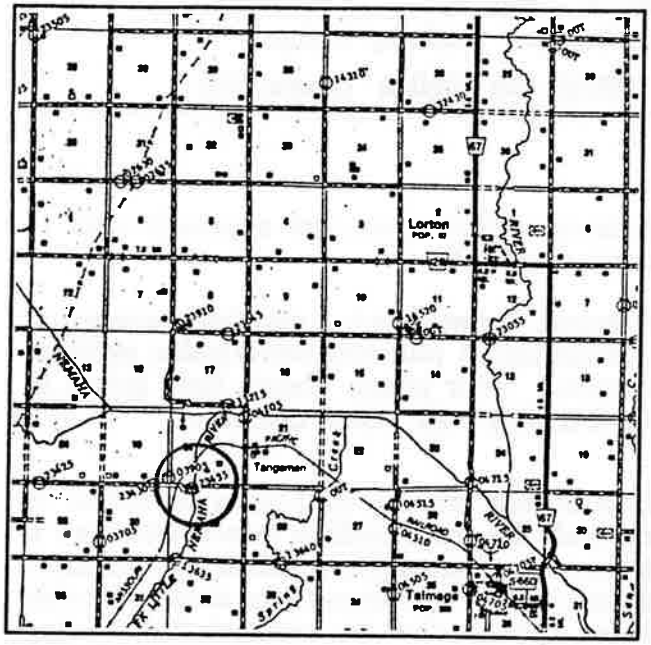
span number: 1
span length: 145.0'
total length: 184.0'
roadway wdt.: 15.0'

superstructure: steel, 8-panel, pin-connected Parker through truss with steel stringer approach span
substructure: steel pile bent abutments and piers with timber wingwalls
floor/decking: timber deck over steel stringers
other features: upper chord: 2 channels with cover plate and lacing; lower chord: 2 punched rectangular eyebars; vertical: 2 channels with lacing; diagonal: 2 punched rectangular eyebars; lateral bracing: round bar; strut: 2 angles braced; floor beam: I-beam field bolted to vertical: guardrail: 2 channels; bridge plate: **CAPACITY 15 TONS ENGINE**

This bridge carries an unpaved county road over the South Fork of the Little Nemaha River about four and one-half miles northwest of Talmage. A pin-connected Parker through truss with a steel stringer approach span on one end, the truss itself is intact, although it apparently has been moved to this site. The Nebraska Department of Roads assigns 1915 as the year of erection, which seems plausible based on the structure's appearance and physical condition. Unfortunately, Commissioners' minutes cannot corroborate the date or provide additional information, because they do not reference a bridge at this site. The minutes do show, though, that the Monarch Engineering Company of Falls City, Nebraska built most steel bridges in Otoe County between 1913 and 1917. During these years Monarch was awarded several annual or multiple bridge contracts, and may have built this span. Without documentation, the Nemaha River Bridge has only limited interpretive value. Although it is apparently an early example of a relatively uncommon vehicular truss type, this structure cannot be said to possess any great degree of significance or integrity.

NAME(S) OF STRUCTURE
Little Nemaha River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006623435; Proceedings of the Otoe County Commissioners, on file in the Otoe County Courthouse, Nebraska City, Nebraska, refer to the following entries: April 1909, book 8, page 106; December 1909, book 8, page 155; April 1911, book 8, page 247; 5 December 1911, book 8, page 289; 10 February 1914, book 9, page 18; 17 February 1915, book 9, page 120; field inspection by Clayton Fraser, 14 November 1989.

INVENTORIED BY
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AFFILIATION
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Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Little Nemaha River Bridge
NDOR: C006631625

OTOE27

DATE(S) OF CONSTRUCTION
1874

LOCATION
county road over the Little Nemaha River; S2/11, T8N, R12E
1.8 miles northwest Dunbar; Otoe County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / closed

RATING NRHP eligible (score: 62)

CONDITION
fair

OWNER
Otoe County

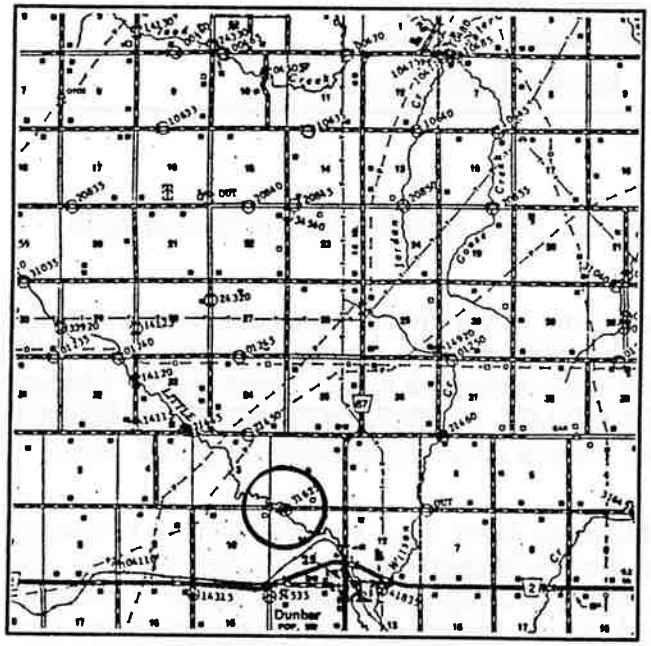
span number:	1	superstructure:	wrought iron 6-panel, bowstring pony arch-truss with steel stringer approach span
span length:	70.0'	substructure:	steel pile bent abutments and pier
total length:	95.0'	floor/decking:	timber decking over steel stringers
roadway wdt.:	16.0'	other features:	upper chord: four plates riveted to form box beam; lower chord: rods continuous through panel points; vertical: 2 star irons with threaded ends; diagonal: round bars with threaded ends; lateral bracing: round bars with threaded ends; floor beam: I-beam; guardrail: missing: builder's plate: **PATD.BY MILLER JUNE 7. 1870 BUCKEYE BRIDGE WORKS CLEVELAND O.**; star iron outrider with S curve at alternating panel points

Located about two miles northwest of Dunbar, this small-scale bowstring spans the Little Nemaha River on a vacated section of county road. The structure consists of a six-panel bowstring arch-truss, flanked by steel stringer approach spans and supported by steel pile bents. Otoe County acquired this iron span from the Buckeye Bridge Company as part of a multiple bridge purchase in 1874. That June the county supervisors received competitive proposals for three iron spans to replace earlier bridges washed out by spring flooding. One span would be located south of Syracuse, one over Russell Creek, and the third over Muddy Creek. The supervisors contracted with Buckeye for the superstructures (based on the design patented in 1870 by M. Miller, one of the firm's proprietors; total cost for the three: $4445) and with a local contractor named McCampbell to build the substructures for $114. Three weeks later the supervisors ordered a fourth span from Buckeye, using the same design as the previous three, to be located over Spring Creek near Dunbar. The Little Nemaha River Bridge has been moved to this location, but it is not known from which of these four original sites it came. Today the bridge and the section of county road it carries have been bypassed by another, newer span nearby. The timber deck is in deteriorating condition, but the iron stringers appear to be original, and the iron span itself remains well-preserved.

Reportedly incorporated in 1872 by Miller and Jamieson, the Buckeye Bridge Company was a small operator compared with its giant neighbor, the King Iron Bridge Company. Nevertheless, this early bridge erector marketed its patented bowstring arch-truss design - with its distinctive box beam arch configuration - throughout the Midwest. It is not known the extent of the company's activity in Nebraska, but this medium-span pony truss is apparently the only remaining span in the state fabricated by Buckeye. Although once moved and now abandoned, this bridge is technologically significant as one of the last remaining examples in Nebraska of what was once a mainstay structural type in the 1870s, 1880s and early 1890s: the bowstring arch-truss. The oldest vehicular span identified in the Nebraska, it is therefore one of the most important.

NAME(S) OF STRUCTURE
Little Nemaha River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006631625; builder's plate; Proceedings of the Otoe County Commissioners, on file in the Otoe County Courthouse, Nebraska City, Nebraska, refer to the following entries in book 1: 2 November 1869, page 436; 12 February 1870, page 475; 1 March 1870, page 480-481; 4 April 1870, page 489; 3 May 1870, page 495; 3 December 1870, page 540; field inspection by Clayton Fraser, 14 November 1989.

INVENTORIED BY
Clayton B. Fraser and Sheila Bricher-Wade

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C006633215

OTOE28

DATE(S) OF CONSTRUCTION
1876 (?)

LOCATION
county road over unnamed stream; S17/20, T7N, R12E
4.1 miles southwest of Lorton; Otoe County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / closed

RATING potentially NRHP eligible (score: 43)

CONDITION
good

OWNER
Otoe County

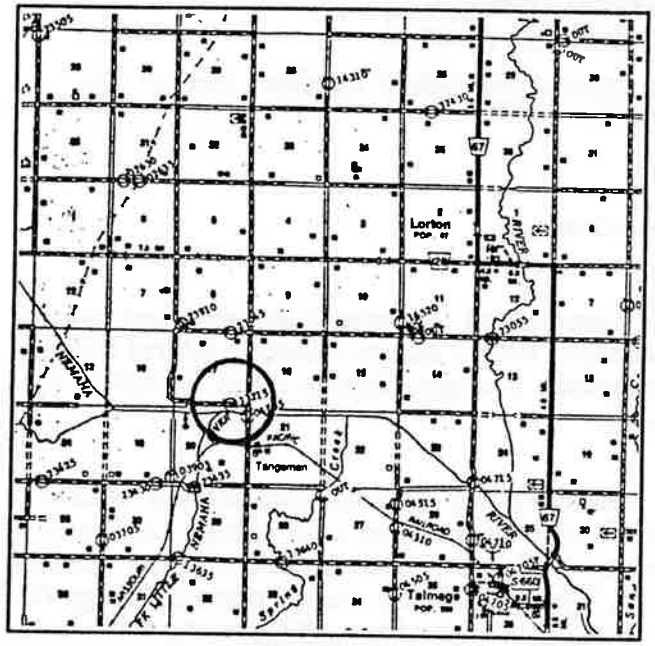
span number:	1	superstructure:	wrought iron, 2-panel, bowstring pony arch-truss
span length:	40.0'	substructure:	steel pile bent pier
total length:	78.0'	floor/decking:	timber over steel stringers
roadway wdt.:	15.6'	other features:	upper chord: 2 channels with side plates; lower chord: 2 rectangular punched eyebars (continuous at panel point); vertical: 1 star iron (with 2 angles added); lateral bracing: 1 angle (welded); floor beam: I-beam; guardrail: 1 angle; bridge plate: **Z. KING PAT SEP 25 1866 KING BRIDGE CO IOLA KAN**

Located four miles southwest of Lorton, this iron bowstring spans a tributary of the Little Nemaha River on a vacated section of county road. The structure consists of two-panel, bowstring arch-truss fabricated from a patented design by the King Iron Bridge Company of Cleveland, Ohio (with a western plant in Iola, Kansas). This bridge has evidently been moved to this location, and its original location is unknown. The most likely source was a site over Goose Creek between Sections 7 and 18, T9N, R13E (the site of present Bridge No. C006610645). The King Iron Bridge Company contracted to build a 40-foot iron span at that crossing in June 1876, along with a 45-foot span over the Little Nemaha River 2-1/2 miles west of Palmyra and a 60-foot span over South Table Creek. A month later, in July 1876, King received contracts to erect two more Otoe County bridges including one at Unadilla. None of these can be confirmed as this truss, however. Although now abandoned, this bridge retains a high degree of physical integrity.

Marketed widely throughout the Midwest by such industry giants as the King Iron Bridge Company and the Wrought Iron Bridge Company, bowstring arch-trusses were the mainstay bridge type for medium-span roadway crossings in the 1870s, 1880s and early 1890s. Several bowstrings were erected in eastern Nebraska during that period, but through subsequent attrition only a handful remains today. Most of these were erected by King. This diminutive bridge in southern Otoe County is significant as a well-preserved, early example of a King bowstring: one of the last surviving trusses of its type remaining in Nebraska.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006633215; Proceedings of the Otoe County Commissioners, on file in the Otoe County Courthouse, Nebraska City, Nebraska, refer to the following entries: 19 June 1876, book 2, page 487; 3 July 1876, book 2, page 493-494; 1 July 1878, book 3, page 19; builder's plate on bridge; field inspection by Clayton Fraser, 14 November 1989.

INVENTORIED BY
Clayton B. Fraser and Sheila Bricher-Wade

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C006653230

OTOE29

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over unnamed stream; S13/24, T7N, R13E
7.0 miles northeast of Talmage; Otoe County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 19)

CONDITION
good

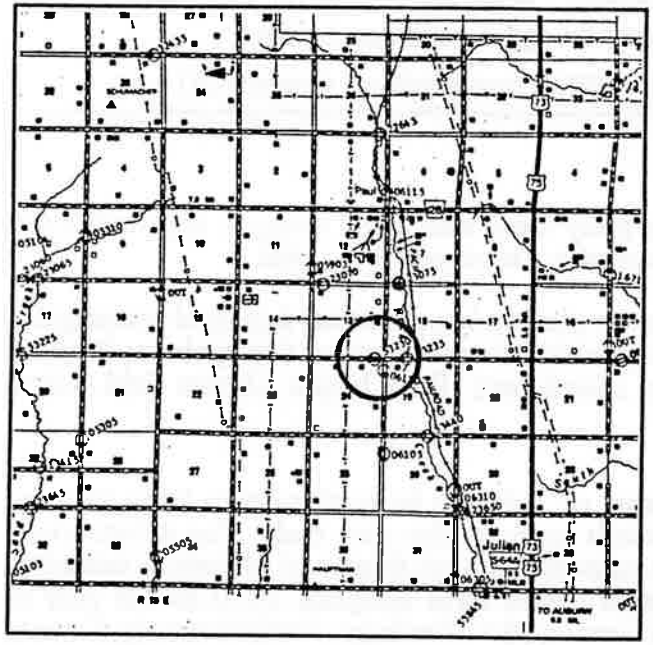
OWNER
Otoe County

span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt half-hip pony truss with steel stringer approach span
span length:	50.0'	substructure:	steel pile bent abutments with timber wingwalls; steel pile bent pier
total length:	70.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	17.7'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 looped rectangular eyebars; 2 round eyebars with turnbuckles; lateral bracing: round bar; floor beam: I-beam field bolted to vertical; guardrail: lattice

This bridge carries an unpaved county road across an unnamed stream seven miles northeast of Talmage in southeastern Otoe County. The structure is a three-panel, pinned Pratt half-hip pony truss with a steel stringer approach span on the east end. The substructure is comprised of steel pile bent abutments with timber backwalls and wingwalls. The bridge possesses a high degree of historical integrity; it is in good physical condition, and appears largely unaltered. The Nebraska Department of Roads have assigned 1910 as the year of construction, a date that seems plausible based on the structure's physical condition, and pin-connected technology. Unfortunately, County Commissioner's Minutes cannot corroborate the date or provide additional information, as they do not specifically reference the bridge. J.R. Sheeley and Company of Lincoln, NE, H.T. Ward of Tecumseh, NE, Monarch Construction Company, and John Gilligan, both of Falls City, NE, and Kimballton Construction Company of Kimballton, IA were the most active Otoe County bridge builders during the period 1905 - 1915. Although this bridge likely represents the work of one of these firms, it is not possible to attribute its construction to a specific builder. This bridge is undistinguished as a typical example of a common structural type.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006653230; Proceedings of the Otoe County Commissioners, on file in the Otoe County Courthouse, Nebraska City, Nebraska, refer to the following entries: 4 April 1905, book 7, page 358; 9 January 1907, book 7, page 563; 4 November 1908, book 8, page 69; April 1909, book 8, page 106; December 1909, book 8, page 155; April 1911, book 8, page 247; 10 February 1914, book 9, page 18; 17 February 1915, book 9, page 120; field inspection by Clayton Fraser, 14 November 1989.

INVENTORIED BY
Clayton B. Fraser and Sheila Bricher-Wade

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Nebraska City Viaduct
NDOR: S075 04754

OTOE30

DATE(S) OF CONSTRUCTION
1936-37

LOCATION
U.S. Highway 73/75 over Burlington Northern / Missouri Pacific Railroads; S8/9, T8N, R14E
Nebraska City; Otoe County, Nebraska

USE (ORIGINAL / CURRENT)
highway overpass / highway overpass

RATING determined NRHP non-eligible (score: 42)

CONDITION
excellent

OWNER
Nebraska Department of Roads

span number:	6	superstructure:	cantilevered steel stringer, skewed
span length:	106.0'	substructure:	concrete spill-through piers
total length:	657.0'	floor/decking:	asphalt over concrete deck with steel stringers
roadway wdt.:	24.0'	other features:	standard rail design concrete guardrail with curbing

Engineers for the Nebraska Bureau of Roads and Bridges completed the design for the multiple-span cantilevered steel stringer structure of the Nebraska City Viaduct in September 1936. Consisting of six 106-foot spans, the viaduct replaced a 1911 concrete arch (which still in place in deteriorating condition) over Table Creek on the south side of the city. In addition to the Table Creek crossing, it carried U.S. Highway 73 over the tracks over the Burlington Northern and Missouri Pacific railroads. The proposed structure was immense, consuming over 782,000 pounds of superstructural steel, 240,130 pounds of reinforcing steel and 1531 cubic yards of concrete. The Bureau awarded the construction contract for the viaduct to the C.F. Lytle Company of Sioux City, Iowa. Lytle in turn contacted with the Omaha Steel Works for the superstructural fabrication. Completed in 1937, the Nebraska City Viaduct has carried relatively heavy traffic since.

The Nebraska City Viaduct typifies steel beam highway bridge construction in Nebraska in the 1930s. The structure is significant as a major example of a federal work relief project, undertaken during the Depression.

NAME(S) OF STRUCTURE
Nebraska City Viaduct

PHOTOS AND SKETCH MAP OF LOCATION

LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number S075 04754; field inspection by Clayton Fraser, 14 November 1989.

INVENTORIED BY
Clayton B. Fraser and Sheila Bricher-Wade

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Ninth Street Bridge
NDOR: U1695B6505

OTOE31

DATE(S) OF CONSTRUCTION
1911

LOCATION
Ninth Street over South Table Creek; S16, T8N, R14E
Nebraska City; Otoe County, Nebraska

USE (ORIGINAL / CURRENT)
city street bridge / city street bridge

RATING NRHP non-eligible (score: 32)

CONDITION
poor integrity

OWNER
City of Nebraska City

span number:	1	superstructure:	concrete filled spandrel arch, cantilevered on west side, skewed
span length:	48.0'	substructure:	concrete
total length:	50.0'	floor/decking:	asphalt over concrete
roadway wdt.:	19.3'	other features:	steel and wood sidewalk; incised square design on guardrail; bridge plate: **1911 HENRY FASTENAU, CHMN. JAS.A.WHITE, F.G.MARKEL, CO. COMMISSIONERS. A.P.YOUNG, CO.CLERK. BUILT BY THE WILSON RE-ENFORCED CON.CO.**

This small-scale concrete structure carries Ninth Street across Table Creek in Nebraska City, the seat of Otoe County. The structure is a skewed, single-span, concrete-filled spandrel arch. A builder's plate lists the county commissioners for 1911, and provides evidence that the bridge was built that year by the Wilson Re-Enforced Concrete Company of Wahoo, Nebraska. The bridge is in rather poor physical condition, and as a result, does not possess a particularly high degree of historical integrity. During 1911 Wilson received payments from the county totaling $10,814.00, including $7,814.00 for building culverts. The remaining $3,000.00 was for the building of concrete bridges, including this span in Nebraska City. Minutes of the County Commissioner's meetings from 1911 cite several payments to Wilson, and note whether the compensation was for bridges or culverts, but little else. Today the bridge still carries city street traffic. The arch itself is intact, but a steel sidewalk has been attached to cantilevered brackets on one side and a pipeline has been hung on the other, compromising the visual integrity of the structure.

Although its integrity has suffered somewhat, the Ninth Street Bridge is significant as an early example of reinforced concrete construction in Nebraska.

NAME(S) OF STRUCTURE
Ninth Street Bridge

PHOTOS AND SKETCH MAP OF LOCATION

LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number U1695B6505; builder's plate; Proceedings of the Otoe County Commissioners, on file in the Otoe County Courthouse, Nebraska City, Nebraska, refer to the following entries in book 8: 4 April 1911, page 250; 3 May 1911, page 254; 5 December 1911, page 289; field inspection by Clayton Fraser, 14 November 1989.

INVENTORIED BY
Clayton B. Fraser and Sheila Bricher-Wade

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Thirteenth Street Bridge
NDOR: U1695K6305

OTOE32

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
Thirteenth Street over South Table Creek; S8, T8N, R14E
Nebraska City; Otoe County, Nebraska

USE (ORIGINAL / CURRENT)
city street bridge / city street bridge

RATING NRHP non-eligible (score: 6)

CONDITION
fair

OWNER
City of Nebraska City

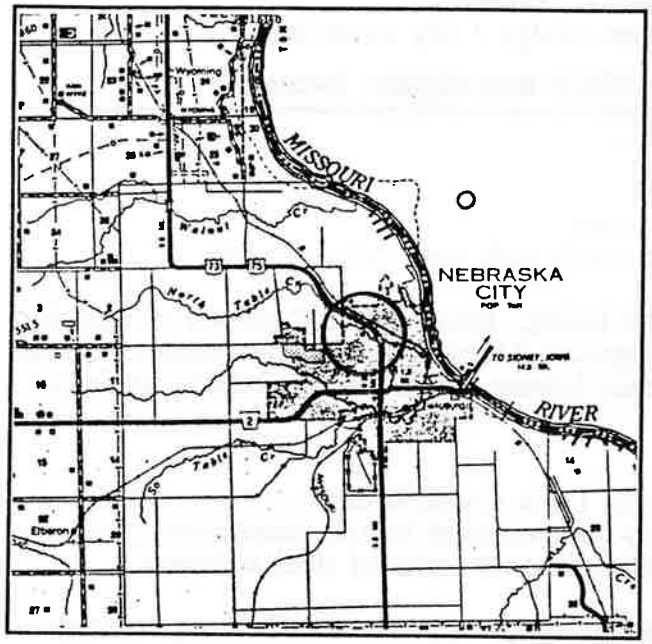
span number:	1	superstructure:	steel, 6-panel, pin-connected Pratt through truss
span length:	100.0'	substructure:	concrete abutments; concrete wingwalls on north end; steel cylinder piers
total length:	100.0'	floor/decking:	timber decking over steel stringers
roadway wdt.:	17.8'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 looped rectangular eyebars; vertical: 2 channels with lacing; diagonal: 2 looped rectangular eyebars; lateral bracing: round bar; strut: 2 angles; floor beam: I-beam field bolted to vertical; guardrail: steel pipe with chain link

Very little is known about this pinned Pratt through truss in Nebraska City. Spanning South Table Creek, it carries Thirteenth Street. The truss appears to have been fabricated ca.1915. Its structural integrity has been severely compromised by the installation in timber piles under the floor beams. This effectively negates the truss's structure and turns the bridge into aa series of steel stringers.

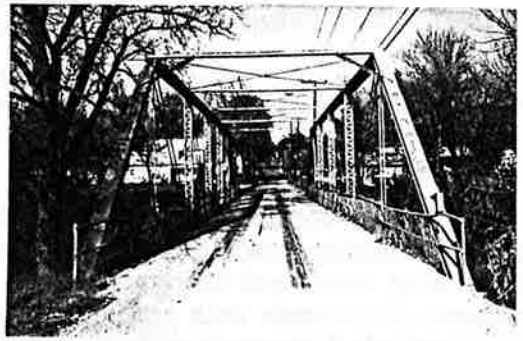
With its construction history undocumented and its integrity compromised, the Thirteenth Street Bridge appears to lack any great degree of historical or technological significance.

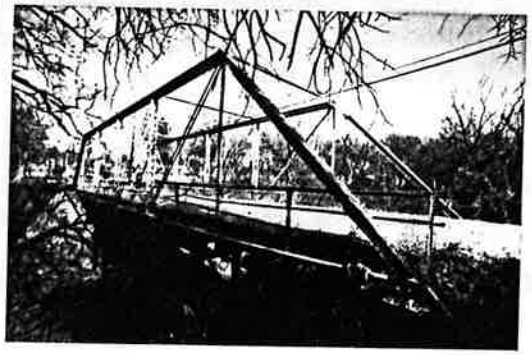
NAME(S) OF STRUCTURE
Thirteenth Street Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number U1695K6305; field inspection by Clayton Fraser, 14 November 1989.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser and Sheila Bricher-Wade	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Big Nemaha River Bridge PAWN01
NDOR: C006700405P

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county highway over the Big Nemaha River; S7/8, T3N, R12E
4 miles north of Table Rock; Pawnee County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 28)

CONDITION
good

OWNER
Pawnee County

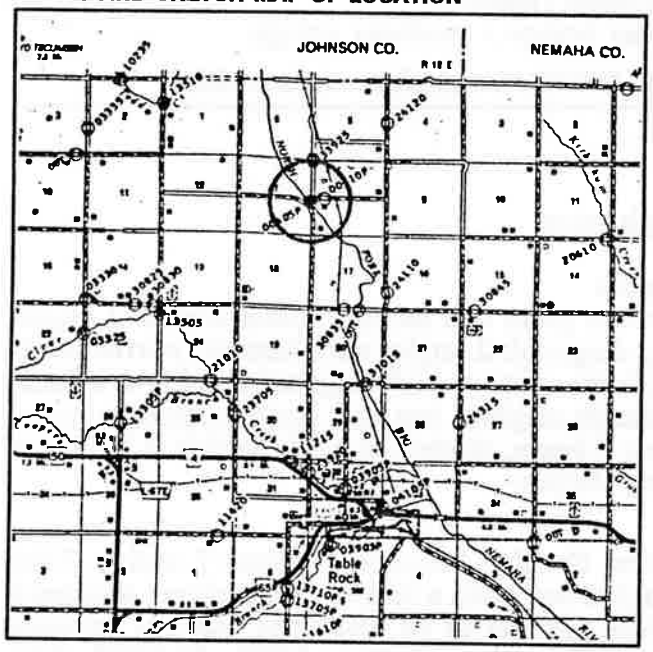
span number:	1	superstructure:	steel, 8-panel, rigid-connected Pratt through truss
span length:	140.0'	substructure:	steel pile bent abutments and piers
total length:	181.0'	floor/decking:	double-layer wood deck over I-beam stringers
roadway wdt.:	15.3'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: 2 angles with battens; vertical: 4 angles with lacing; diagonal: 2 angles with battens; portal: back-to-back angles; overhead bracing: top and bottom struts and diagonal bracing are back-to-back angles, intermediate verticals are single angles; top and bottom laterals: cross-braced circular-section eyerods; floor beam: I-beam, riveted to angle which is bolted to gusset plate and bottom of vertical; railing: lattice

This medium-span truss carries a gravel-surfaced county road over the Big Nemaha River on the line between Sections 7 and 8, T3N, R12E, in Table Rock Precinct. The bridge consists of a 140-foot rigid-connected Pratt through truss, with a single steel stringer approach span on the south. The spans are carried by steel pile bent abutments and piers. The truss appears to be unaltered and has retained a high degree of integrity. The first crossing at this site was apparently a 68-foot span erected by the county in 1898. In 1913, state law required all counties to adopt state bridge plans, which specified field riveting rather than bolting. The current bridge, which is bolted, was therefore probably built ca.1910, possibly by the H.T. Ward Bridge Company of Tecumseh NE, the county's primary contractor in the 1910s. The bridge strongly resembles a 1914 state plan for a 150-foot, riveted, 8-panel Pratt through truss, and may be based on an earlier state design.

This structure is typical of many through trusses built in Nebraska in the 1910s.

NAME(S) OF STRUCTURE
Big Nemaha River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006700405P; Nebraska Department of Roads and Irrigation, **Tenth Biennial Report of the State Board of Irrigation, September 1, 1912 to September 1, 1914**, pp. 222, 232; State of Nebraska, "Standard Bridge Plan, 150 Foot Span, 8-Panel-High Truss-Riveted-Wood Floor, 16 Foot Roadway," 27 January 1914, plan number 273, located in Bridge Division, Nebraska Department of Roads, Lincoln, Nebraska; Proceedings of the Pawnee County Commissioners, located in Pawnee County Courthouse, Pawnee City, Nebraska, 1900-1913, for specific reference, see 26 July 1898 (book 5, page 180); field inspection by Demian Hess, 23 July 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Burlington Railroad Underpass PAWN02
NDOR: C006701105

DATE(S) OF CONSTRUCTION
1912

LOCATION
county road over stream and county road; S13/14, T2N, R9E
1 mile west and 0.4 miles south of Burchard; Pawnee County, Nebraska

USE (ORIGINAL / CURRENT)
railroad bridge / railroad bridge

RATING NRHP non-eligible (score: 28)

CONDITION
good

OWNER
Burlington Northern Railroad

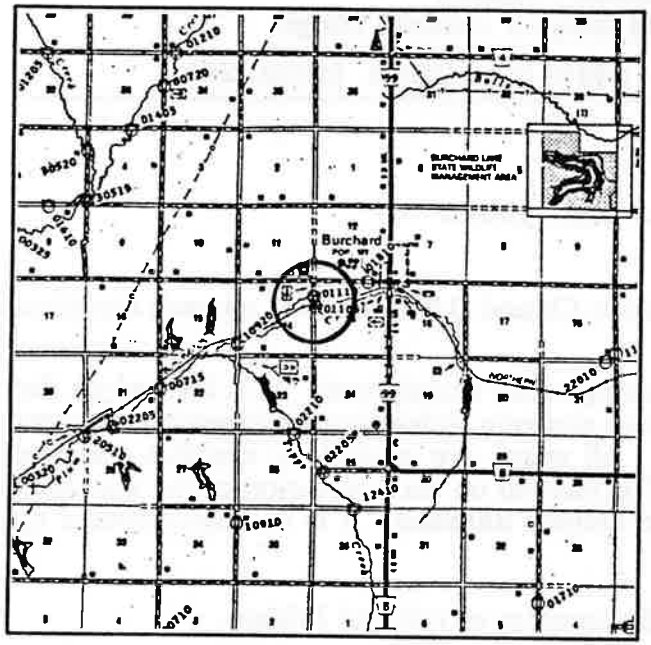
span number:	2	superstructure:	approaches: concrete slabs; main: steel deck plate girders
span length:	41.0'	substructure:	concrete abutments and piers
total length:	124.0'	floor/decking:	concrete
roadway wdt.:	14.0'	other features:	no guardrails; 1912 inscribed in west abutment; CB and Q RR inscribed on each elevation

This structure carries the track of the Burlington Northern Railroad over a stream and an unimproved county road. It is located on the line between Section 13 and 14, T2N R9E, Plum Creek Precinct. The structure consists of two concrete slab approach spans on the west which cross the county road, and two steel plate girders on the east, over the stream. All spans are carried by massive concrete abutments and piers. The date "1912" is inscribed in the west abutment, and "CB and Q RR" is marked on each elevation of the approach spans. The bridge was probably constructed and designed by the Chicago, Burlington and Quincy Railroad. It is currently owned by the Burlington Northern Railroad, is unaltered and has good integrity.

This is an early example of concrete bridge construction, but should be evaluated within the context of railroad bridges.

NAME(S) OF STRUCTURE
Burlington Railroad Underpass

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006701105; field inspection by Demian Hess, 22 July 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Turkey Creek Bridge
NDOR: C006702005P

PAWN03

DATE(S) OF CONSTRUCTION
ca.1935

LOCATION
county highway over Turkey Creek; S21, T2N, R11E
0.2 miles north and 1.7 miles west of Pawnee City; Pawnee County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 22)

CONDITION
good

OWNER
Pawnee County

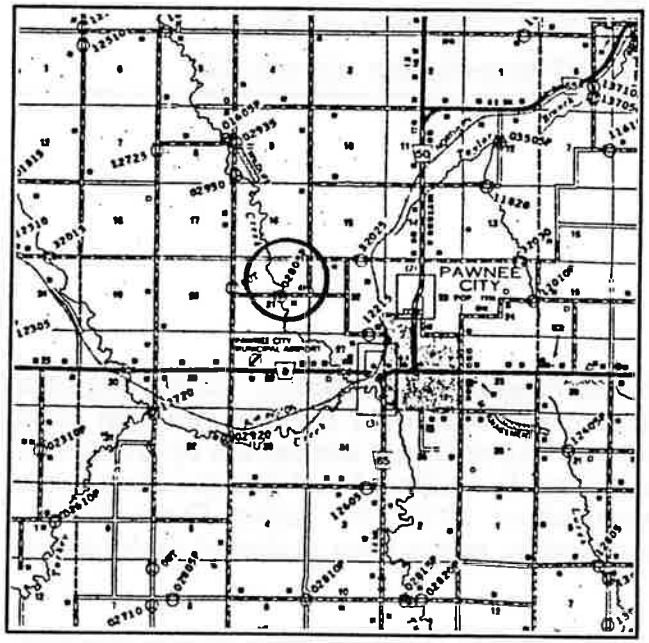
span number:	1	superstructure:	steel plate through girder
span length:	60.0'	substructure:	steel pile bent abutments and pier
total length:	94.0'	floor/decking:	concrete deck
roadway wdt.:	18.0'	other features:	no guardrails

This bridge carries a gravel-surfaced county road over Turkey Creek in Section 21, T2N, R11E, Pawnee City Precinct. Consisting of a single steel plate girder with a steel stringer approach span on the east, the bridge superstructure is supported by steel pile bent piers and abutments. The main span is equipped with a concrete deck, which rests on I-beam stringers. The stringers are carried by transverse plate girder joists riveted to the webs and lower flanges of the main through girders. The structure is unaltered and has good integrity. According to the state highway engineer, girder spans over 50-feet were not developed until about 1930; the Turkey Creek Bridge, therefore, probably dates to around 1935. The structure does not appear to be a standard state design, as the state preferred deck girders over through girders in the 1930s.

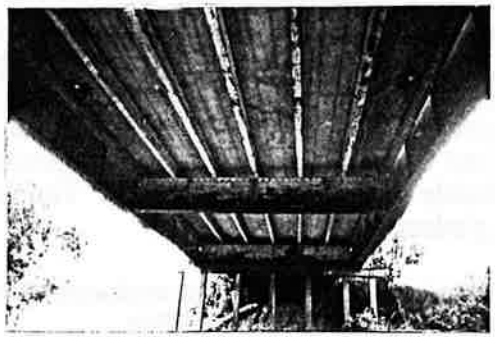
With its construction history largely undocumented, this bridge enjoys marginal technological significance as an example of non-standard girder bridge construction in the 1930s.

NAME(S) OF STRUCTURE
Turkey Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006702005P; Nebraska Department of Roads and Irrigation, Eighteenth Biennial Report of the Department of Public Works, 1929-1930, pp. 113-114; field inspection by Demian Hess, 23 July 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge PAWN04
NDOR: C006702115

DATE(S) OF CONSTRUCTION
ca.1900

LOCATION
county highway over West Branch of Turkey Creek; S11, T1N, R10E
5.7 miles west, 2.6 miles south of Pawnee City; Pawnee County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 40)

CONDITION
good

OWNER
Pawnee County

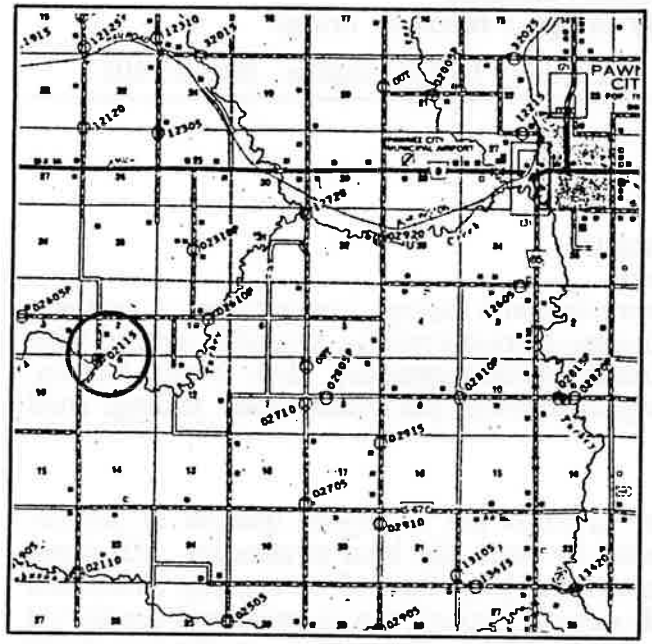
span number:	1	superstructure:	steel, 4-panel, pinned Pratt pony truss
span length:	64.0'	substructure:	steel pile bent abutments with timber backwalls
total length:	65.0'	floor/decking:	double-layer wood deck over I-beam stringers
roadway wdt.:	14.0'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: 2 eyebars; vertical: 4 angles with lacing; diagonal: 2 circular-section eyerods; counter: eyerod with turnbuckle; bottom lateral: cross-braced circular-section eyerods; floor beam: I-beam, fastened to the superstructure by U-bolt hung over lower pin connection; railing: steel cable

This small-scale bridge carries a gravel-surfaced county road over the West Branch of Turkey Creek in the northwest quarter of Section 11, T1N, R11E, West Branch Precinct. The bridge is a single-span, Pratt pony truss, supported by steel pile bent abutments. All panel points are pinned, with the exception of the hip connections, where a cast iron gib plate covers the joint formed by the top chord and endpost, and holds the hip vertical and diagonals in place. The threaded ends of the diagonals extend through the endpost and are bolted to the far side of the gib plate. The upper end of the hip vertical is riveted to a threaded tang, which projects through the top chord and plate and is also bolted. This type of construction was used by the Wrought Iron Bridge Company of Canton, Ohio, for their standard pony trusses in the late 1890s and by the Canton Bridge Company in the early 1900s. County records do not mention this structure specifically, however, making definitive dating impossible. The structure appears to be unaltered and has good integrity.

This bridge employs cast iron blocks at its hip connections, a fabrication method that was archaic even at the time the bridge was erected. Nevertheless, this was a standard design for at least two major Ohio-based bridge companies active in Nebraska, and numerous examples were probably built in the state around the turn of the century. Through attrition, however, only two of this type of structure are known to remain in the state (the other: CHER17). This bridge is thus technologically significant as an exceptionally rare, early example of pony truss construction.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006702115; Proceedings of the Pawnee County Commissioners, 1894-1914, located in the Pawnee County Courthouse, Pawnee City, Nebraska; for another example of a bridge with identical connections, see the Hackney Mill Bridge, Greene County, Missouri, surveyed by FraserDesign, Loveland, Colorado, as part of its ongoing Statewide Survey of Historic Missouri Highway Bridges; field inspection by Demian Hess, 22 July 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Turkey Creek Bridge
NDOR: C006702815P

PAWN05

DATE(S) OF CONSTRUCTION
ca.1925

LOCATION
county highway over Turkey Creek; S11, T1N, R11E
2.7 miles north, 5.6 miles west of Du Bois; Pawnee County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 13)

CONDITION
good

OWNER
Pawnee County

span number: 1
span length: 100.0'
total length: 101.0'
roadway wdt.: 14.5'

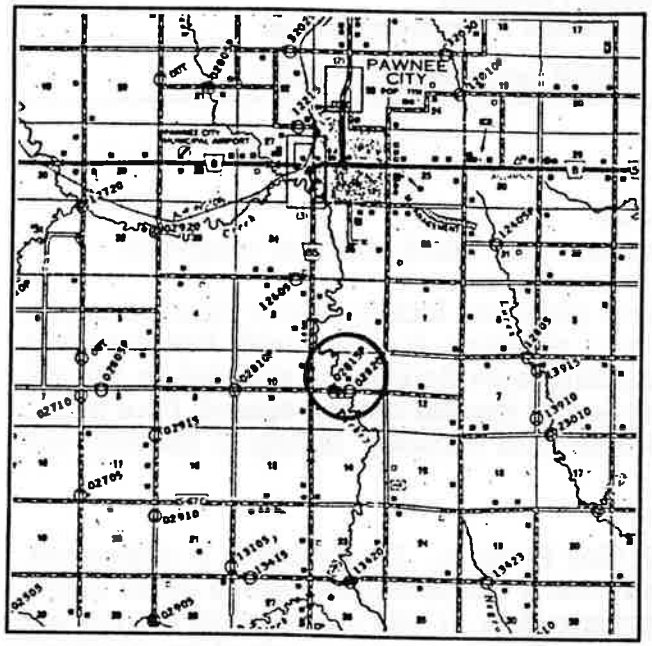
superstructure: steel, 5-panel, rigid-connected Pratt pony truss
substructure: riveted steel piles encased in concrete abutments with flared concrete wingwalls
floor/decking: concrete deck over I-beam stringers
other features: upper chord: back-to-back channels with cover plate and lacing; lower chord: 2 angles with battens; vertical: 4 angles with battens; diagonal: 2 angles with battens; sway bracing: outriders formed by solid plate extending from floor beam and tied to vertical by back-to-back angles; bottom lateral: cross-braced circular section eyerod; floor beam: I-beam, bolted to angle which is riveted to bottom of vertical; railing: 2 channel rails bolted to angle posts

This long-span truss carries a county highway over Turkey Creek in Section 11, T1N, R11E, Clay Precinct. The bridge is a single-span, rigid-connected Pratt pony truss with outrider-type sway bracing, steel and concrete abutments and a concrete deck. Based on its design and dimensions, the bridge probably dates to ca.1925. According to the county highway superintendent, it was moved to its current site fairly recently, but he was unsure of the exact date. Aside from its relocation, the bridge is unaltered and has retained its structural integrity.

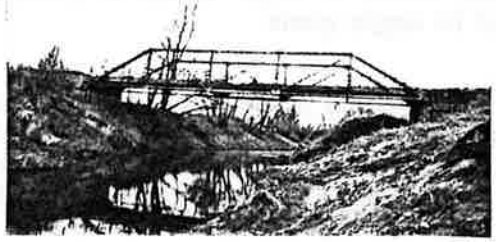
The Turkey Creek Bridge is one of three similar 100-foot riveted Pratt ponies surveyed in Pawnee County and is one of dozens of this relatively common structural type found in the state. Virtually all of these can be attributed to the standardized designs developed by the state department of roads. Although the 100-foot span is the longest developed by the highway department for this truss configuration (through trusses were used for longer spans), this fact is only marginally noteworthy. More significant, multi-span examples of this truss remain in use, unaltered, over the Platte River in western Nebraska. The Turkey Creek Bridge suffers in comparison with these potentially eligible structures. As a historically undocumented, single-span example of a common structural type, carrying a secondary county road over a minor watercourse, the Turkey Creek Bridge enjoys marginal historical and technological significance.

NAME(S) OF STRUCTURE
Turkey Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006702815P; Proceedings of the Pawnee County Commissioners, 1875-1930, located in the Pawnee County Courthouse, Pawnee City, Nebraska; Demian Hess, personal interview with Charlie Morin, Pawnee County Highway Superintendent, 25 January 1990; field inspection by Demian Hess, 24 January 1990.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Johnson Creek Bridge
NDOR: C006702905

PAWN06

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county highway over Johnson Creek; S28/29, T1N, R11E
2 miles west, 6 miles south of Pawnee City; Pawnee County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 22)

CONDITION
poor

OWNER
Pawnee County

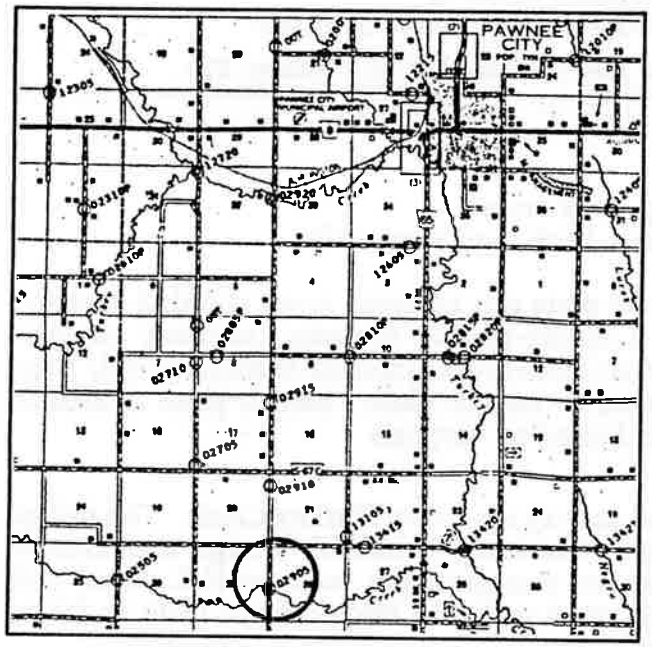
span number:	1	superstructure:	steel, 4-panel, pin-connected, Pratt half-hip pony truss
span length:	60.0'	substructure:	bolted, steel pile bent abutments with timber back- and wingwalls
total length:	62.0'	floor/decking:	wood deck over I-beam stringers
roadway wdt.:	13.7'	other features:	upper chord: back-to-back channels with cover plate and battens; lower chord: 2 eyebars; vertical: 4 angles with lacing; diagonal: 2 square-section eyerods; counter: circular-section eyerod with turnbuckle; bottom lateral: cross-braced circular-section eyerod; floor beam: I-beam riveted to angle which is bolted to hanger plate - hanger plate riveted to bottom of vertical; railing: 2 wooden rails bolted to verticals

Located southwest of Pawnee City in Clay Precinct, this small-scale bridge carries an unpaved county road over Turkey Creek. The bridge consists of a single pinned Pratt half-hip pony truss on bolted, steel pile bent abutments. The bridge's half-hip design and narrow roadway width of only 13.7-feet suggest a construction date of around 1910. The structure was probably built by H.T. Ward and Company of Tecumseh NE, which appears to have constructed nearly all of Pawnee County's steel and iron bridges from 1894 to 1914. Due to welded alterations, the bridge's physical integrity has been compromised significantly.

This structure is typical of many half-hip Pratt pony trusses in Nebraska. Due to alterations, it has lost integrity and is not eligible for the National Register.

NAME(S) OF STRUCTURE
Johnson Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006702905; Proceedings of the Pawnee County Commissioners, 1894-1914, located in the Pawnee County Courthouse, Pawnee City, Nebraska; Demian Hess, personal interview with Charlie Morin, Pawnee County Highway Superintendent, 25 January 1990; field inspection by Demian Hess, 24 January 1990.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Taylor Branch Bridge
NDOR: C006703505P

PAWN07

DATE(S) OF CONSTRUCTION
ca. 1901-05

LOCATION
county highway over Taylor Branch; S12, T2N, R11E
2.5 miles north, 1 mile east of Pawnee City; Pawnee County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 30)

CONDITION
poor

OWNER
Pawnee County

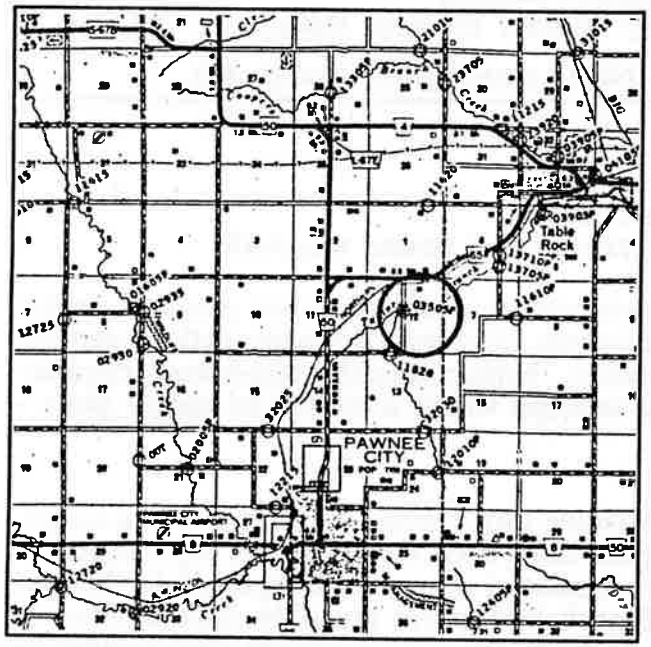
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt truss leg bedstead
span length:	40.0'	substructure:	steel truss leg piers, with steel pile bent abutments and timber wingwalls
total length:	57.0'	floor/decking:	wood deck over I-beam stringers
roadway wdt.:	15.9'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: 2 angles with battens; vertical: 4 angles with double lacing; diagonal: 2 square-section eyerods; counter: circular-section eyerod with turnbuckle; bottom lateral: cross-braced circular-section eyerod; floor beam: I-beam, bolted to angle which is riveted to hanger plate - hanger plate riveted to bottom of vertical

This small-scale bridge carries a county road over Taylor Branch in Section 12, T2N, R11E, Pawnee City Precinct. The bridge is a single-span, pinned Pratt bedstead. Members in the east web are bent from a collision, and steel piles have been welded to the superstructure and legs to serve as abutments, compromising the structure's physical integrity significantly. Bedstead trusses first appeared in the late 1870s, losing popularity in the early 1900s. Based on its design and detailing, the Taylor Branch Bridge was probably erected between 1901 and 1905 by H.T. Ward and Company of Tecumseh NE, the county's primary bridge builder. Ward built several steel bridges in these years, and specifically proposed to build "leg spans," or bedstead trusses, in 1903, 1904 and 1905. The company does not appear to have erected any such "leg spans" after 1905.

Although a rare bridge type, this structure has been too extensively altered to be considered eligible for the National Register.

NAME(S) OF STRUCTURE
Taylor Branch Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006703505P; Proceedings of the Pawnee County Commissioners, 1896-1914, located in Pawnee County Courthouse, Pawnee City, Nebraska; field inspection by Demian Hess, 24 January 1990.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Manley Creek Bridge
NDOR: C006703820

PAWN08

DATE(S) OF CONSTRUCTION
ca.1925

LOCATION
county highway over Manley Creek; S33, T1N, R10E
2 miles east, 10 miles south of Burchard; Pawnee County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 13)

CONDITION
fair

OWNER
Pawnee County

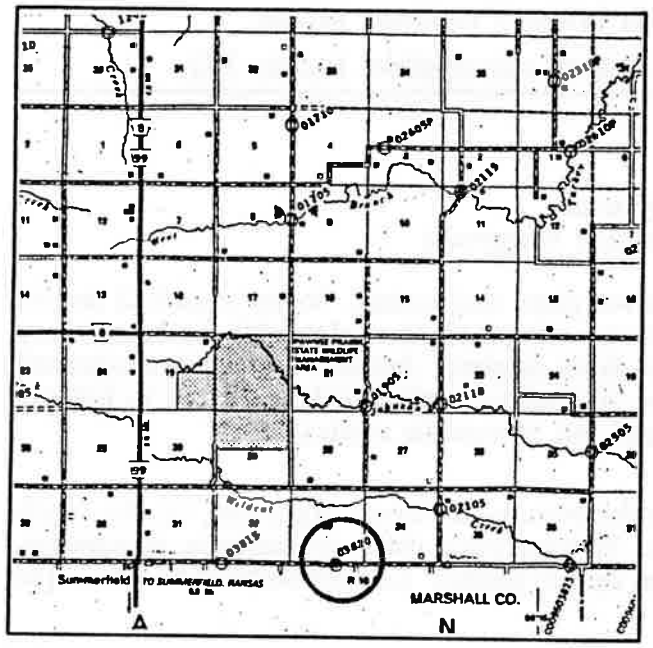
span number:	1	superstructure:	steel, 3-panel, rigid-connected Warren pony truss
span length:	50.0'	substructure:	concrete abutments with flared, sloped concrete wingwalls
total length:	50.0'	floor/decking:	concrete deck over I-beam stringers
roadway wdt.:	15.0'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: 2 angles with battens; vertical: 4 angles with battens; diagonal: 2 angles with battens; sway bracing: knee bracing composed of back-to-back angles; bottom lateral: cross-braced circular-section eyerod; floor beam: I-beam, riveted to angle which is riveted to bottom of vertical and lower chord; railing: channel rail riveted to verticals

Carrying an unpaved county road over Manley Creek, this small-scale structure is located on the Nebraska/Kansas state line, on the south edge of Section 33, T1N, R10E, West Branch Precinct. The bridge is a single-span, riveted Warren pony truss on concrete abutments. It has lost a degree of physical integrity by plates having been welded to the diagonals of the center panels. County records do not make specific reference to this structure, but it appears to have been built ca.1925.

Although used as a standard highway truss type in many Midwestern states, the Warren truss was never adopted by the Nebraska Bureau of Roads and Bridges as a standard. Warren trusses are, therefore, uncommon in Nebraska. (Less than 50 have been identified by the statewide bridge inventory.) Unfortunately, welded alterations have compromised this structure's integrity and it is not eligible for the National Register.

NAME(S) OF STRUCTURE
Manley Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006703820; Proceedings of the Pawnee County Commissioners, 1875-1930, located in Pawnee County Courthouse, Pawnee City, Nebraska; field inspection by Demian Hess, 26 January 1990.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Table Rock Bridge
NDOR: C006704105P

PAWN09

DATE(S) OF CONSTRUCTION
ca.1925

LOCATION
county highway over stream; S32/33, T3N, R12E
northern edge of Table Rock; Pawnee County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 11)

CONDITION
good

OWNER
Pawnee County

span number: 1
span length: 150.0'
total length: 150.0'
roadway wdt.: 18.9'

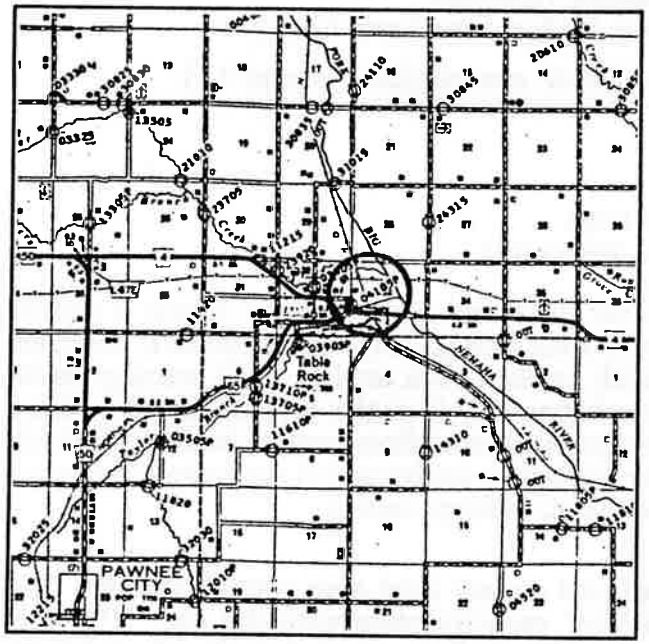
superstructure: steel, 8-panel, pin-connected Pratt through truss
substructure: wood pile abutments with timber back and wingwalls
floor/decking: double-layer wood deck over I-beam stringers
other features: upper chord: back-to-back channels with cover plate and lacing; lower chord: 2 sets of paired eyebars; vertical: back-to-back channels with lacing; diagonal: 2 eyebars; counter: square-section eyerod with turnbuckle; portal: back-to-back angles; sway bracing: back-to-back angles; overhead bracing: T-section formed by 2 angles riveted to solid plate; top and bottom lateral: cross-braced circular-section eyerod; floor beam: I-beam with steel-plate bottom bracing, ends of floor beams are riveted to angles which are bolted to hanger plates - hanger plate bolted to bottom of vertical; railing: lattice

Located at the northern edge of the small town of Table Rock, this truss carries a gravel-surfaced county road over a small stream. The bridge is a single-span pinned Pratt through truss on wood pile abutments. Oddly, a "20 Ton" capacity plate with the date "1964" is mounted on the southeast end post, while another capacity plate with the date "1940" is set on the northwest endpost. Another strange feature is the large number of different steelmakers' marks on the superstructure - five different marks in all. Aside from splice welding in the top lateral, no major alterations are visible, although the wood pile bent abutments suggest that the truss has been moved to this location or the substructure has been replaced entirely. Although county records do not provide a construction date, the bridge's roadway width of 18.9-feet suggests a date of ca.1925.

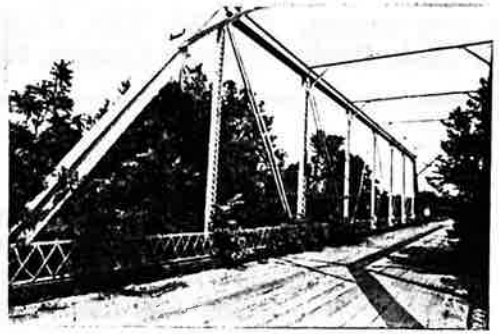
The floor beams of the Table Rock Bridge have been braced in an unusual manner, and the superstructure steel reveals a surprisingly high number of steel makers' marks, but this structure is in reality an undistinguished example of a relatively common truss type.

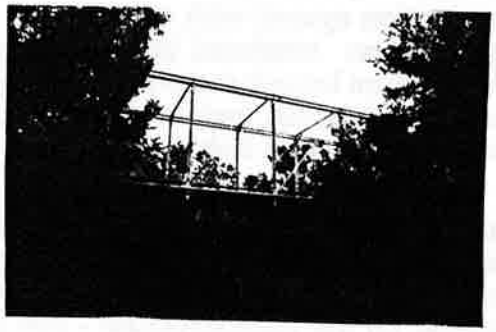
NAME(S) OF STRUCTURE
Table Rock Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006704105P; Proceedings of the Pawnee County Commissioners, 1875-1930, located in Pawnee County Courthouse, Pawnee City, Nebraska; field inspection by Demian Hess, 23 July 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Todd Creek Bridge
NDOR: C006710235

PAWN10

DATE(S) OF CONSTRUCTION
1911

LOCATION
county highway over Todd Creek; S2, T3N, R11E
2.5 miles west, 5 miles north Table Rock; Pawnee County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / closed

RATING NRHP non-eligible (score: 32)

CONDITION
good

OWNER
Pawnee County

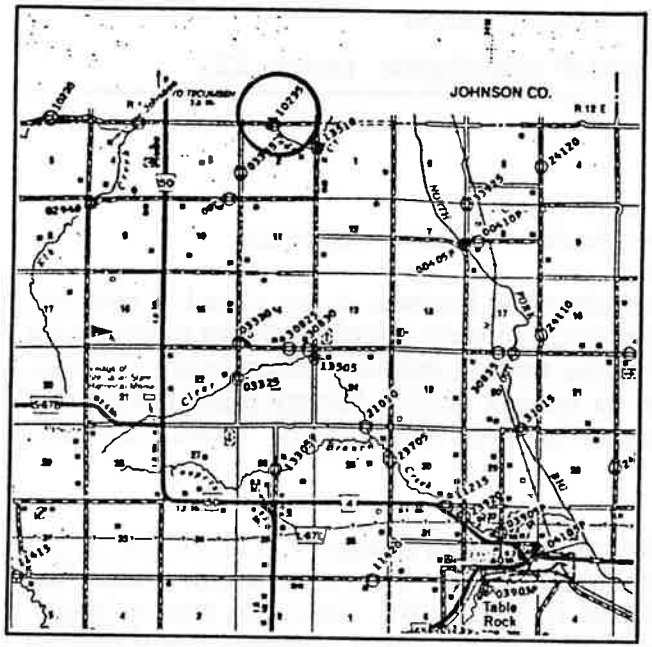
span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt half-hip pony truss
span length:	60.0'	substructure:	welded steel pile bent abutments with timber back and flared wingwalls
total length:	61.0'	floor/decking:	double-layer wood deck over I-beam stringers
roadway wdt.:	16.0'	other features:	upper chord: back-to-back channels with cover plate and battens; lower chord: 2 eyebars; vertical: 4 angles with lacing; diagonal: 2 eyebars; counter: circular-section eyerod with turnbuckle; bottom lateral: cross-braced circular-section eyerod; floor beam: I-beam, riveted to angle which is bolted and riveted to hanger plate - hanger plate bolted and riveted to bottom of vertical; endpost-mounted builder's plate: **1911 BUILT BY H.T. WARD & CO**

Situated on the Pawnee/Johnson county line, this small-scale bridge crosses Todd Creek on the north edge of Section 2, T3N, R11E, Clear Creek Precinct. The structure consists of a single-span pinned Pratt pony truss, supported by new steel pile bent abutments. According to a plate on the northeast endpost, the truss was erected in 1911 by H.T. Ward and Company of Tecumseh NE, the major county bridge contractor for Pawnee County from 1894 to 1914. In his unit price proposal for the county's 1910/1911 bridge contract, Ward offered to construct all 60-foot, wood-floored, steel spans for $15.15 per lineal foot of superstructure, not including the price of abutments. The Todd Creek Bridge was obviously built under this contract. Aside from missing railings, new abutments and minor welding to the bottom lateral, the bridge is unaltered and has retained its basic structural integrity. It is currently closed to traffic.

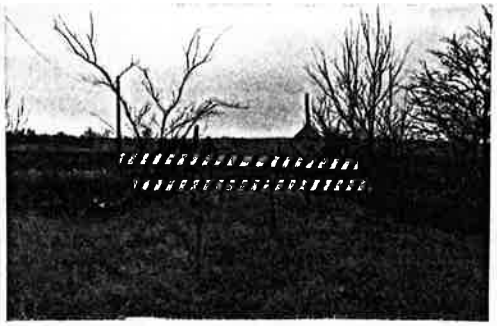
The Todd Creek Bridge is typical of the numerous short-span Pratt trusses in Nebraska.

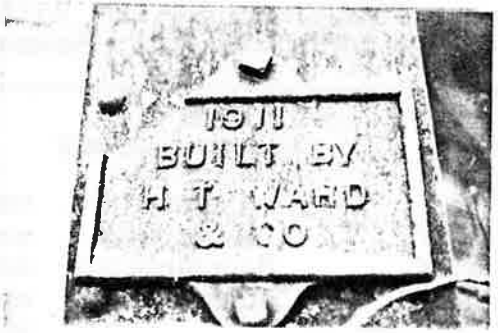
NAME(S) OF STRUCTURE
Todd Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006710235; Proceedings of the Pawnee County Commissioners, 1894-1914, located in Pawnee County Courthouse, Pawnee City, Nebraska, also see entry dated 4 October 1910, page 32, volume 6; field inspection by Demian Hess, 24 January 1990.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Rock Creek Bridge
NDOR: C006710815

PAWN11

DATE(S) OF CONSTRUCTION
ca.1930

LOCATION
county highway over Rock Creek; NE 1/4 S20, T3N, R10E
1.5 miles south, 5 miles east of Lewiston; Pawnee County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 18)

CONDITION
good

OWNER
Pawnee County

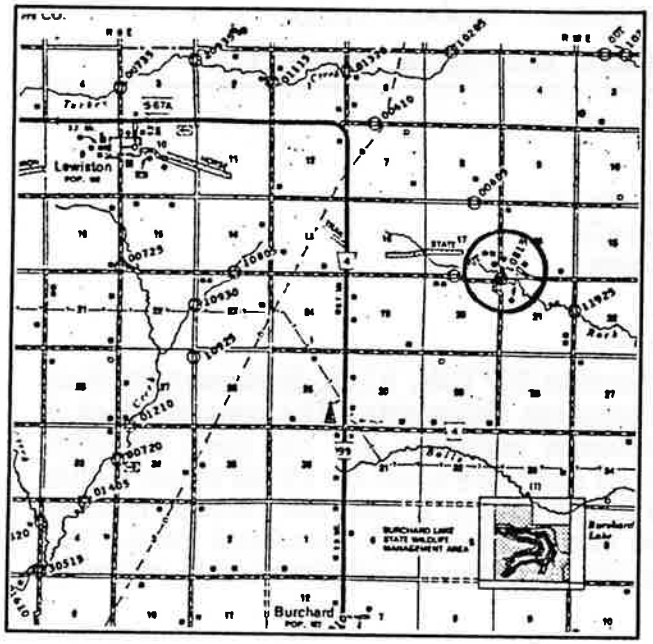
span number:	1	superstructure:	steel plate through girder with polygonal top chord
span length:	40.0'	substructure:	concrete abutments with flared, sloped wingwalls
total length:	40.0'	floor/decking:	concrete deck carried by I-beam transverse joists
roadway wdt.:	19.2'	other features:	no guardrail

This bridge carries a gravel-surfaced county road over Todd Creek in the northeast corner of Section 20, T3N, R10E, Steinauer Precinct. The bridge is a single-span, steel, plate, through girder with polygonal top chord resting on concrete abutments. The concrete deck is carried by transverse I-beam joists riveted to the webs of the through girders. The structure is unaltered and has good integrity. Although atypical, the bridge is essentially a transverse joist girder, a type widely used throughout Nebraska from the 1910s to the 1930s. Most such bridges, however, did not employ girders with polygonal top chords. The Todd Creek Bridge is unusual. Bridge builders provided prices for "girder" spans in Pawnee County as early 1904, although these may have been built of both wood and steel. "All-steel" girder bridges in 24- and 32-foot lengths seem to have first appeared in the county in 1911. Given its relatively wide roadway, this bridge probably dates to ca.1930.

This is an unusual example of non-standardized, transverse joist girder construction.

NAME(S) OF STRUCTURE
Rock Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006710815; Proceedings of the Pawnee County Commissioners, 1904-1930, located at Pawnee County Courthouse, Pawnee City, Nebraska, for specific references, see: 4 November 1904 (book 5, page 484), 5 October 1909 (book 6, page 7), 9 November 1911 (book 6, page 57); Ted Johnson, "A Discussion of the Transverse Joist Girder Bridge," The Nebraska Blue Print 26 (March 1927): 12-13; field inspection by Demian Hess, 22 July 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C006712305

PAWN12

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
county highway over stream; S25/26, T2N, R10E
5 miles east, 2 miles south of Burchard; Pawnee County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 19)

CONDITION
good

OWNER
Pawnee County

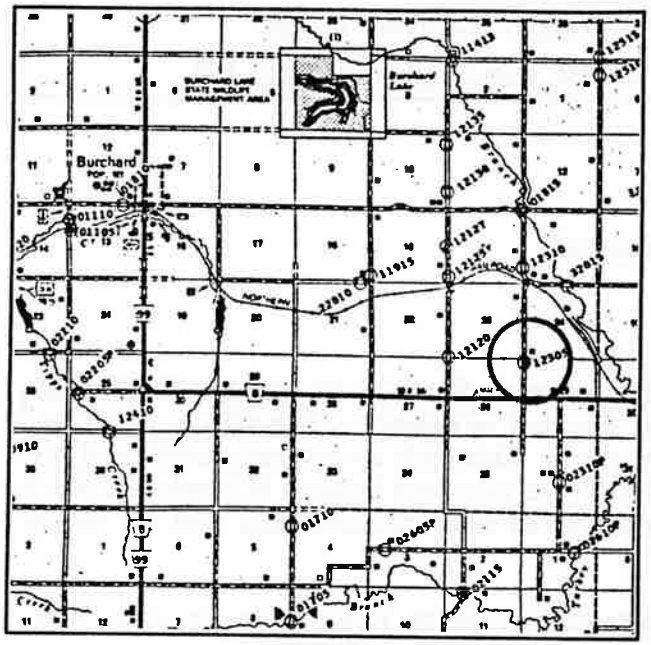
span number:	1	superstructure:	concrete slab with I-beam reinforcing
span length:	27.0'	substructure:	concrete abutments with flared, stepped wingwalls
total length:	28.0'	floor/decking:	concrete deck
roadway wdt.:	20.0'	other features:	2 angle rails on angle posts

This bridge carries a gravel-surfaced county road over a small stream. It is located on the line between Sections 25 and 26, T2N, R10E, Mills Precinct. The bridge is a single-span, concrete slab on concrete abutments with flared, stepped wingwalls. The slab is reinforced with I-beams, which are visible where the concrete has spalled away on the underside of the deck. Although structurally unaltered, the concrete in the slab and wingwalls is now deteriorating. H.T. Ward and Company built the first two concrete bridges in Pawnee County in 1910, several miles east of this bridge. The I-beam reinforcing in this bridge is probably a sign of early construction, and the bridge may date to ca.1915.

This bridge is an uncommon early example of concrete slab construction. Its lack of documentation, however, limits its interpretive value and diminishes its significance.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006712305; Proceedings of the Pawnee County Commissioners, 1875-1930, located in Pawnee County Courthouse, Pawnee City, Nebraska, see entry dated 5 July 1910 (book 6, page 25); field inspection by Demian Hess, 22 July 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Turkey Creek Bridge
NDOR: C006713420

PAWN13

DATE(S) OF CONSTRUCTION
ca.1930

LOCATION
county highway over Turkey Creek; S23/26, T1N, R11E
5 miles south, 0.5 miles east of Pawnee City; Pawnee County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 13)

CONDITION
good

OWNER
Pawnee County

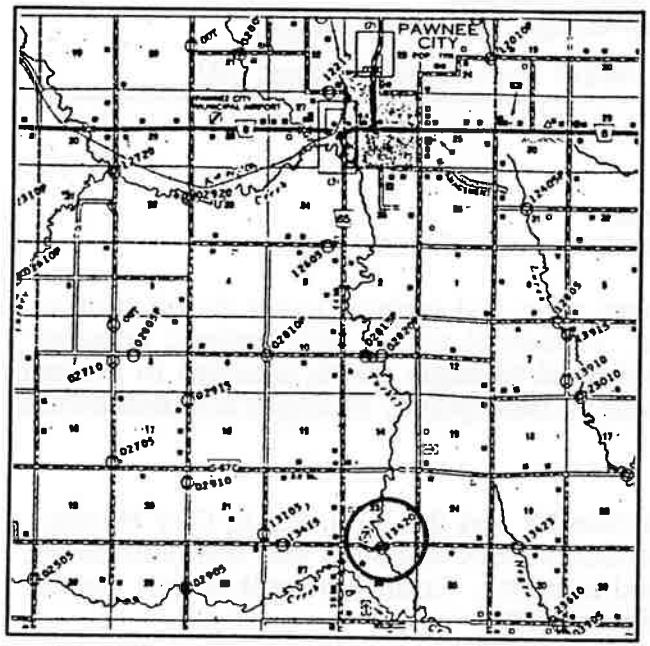
span number:	1	superstructure:	steel, 5-panel, rigid-connected Pratt pony truss
span length:	100.0'	substructure:	steel pile bent abutments with steel plate back and flared wingwalls
total length:	102.0'	floor/decking:	concrete deck over I-beam stringers
roadway wdt.:	19.0'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: back-to-back channels with top and bottom battens; vertical: 4 angles with battens; diagonal: 2 angles with battens; floor beam: I-beam riveted to angle which is bolted to bottom of vertical; bottom lateral: cross-braced circular-section eyerod; railing: 2 channels bolted to channel posts

This bridge carries a gravel-surfaced county road over Turkey Creek on the line between Section 23 and 26, T1N, R11E, Clay Precinct. Load-rated at 15 tons, the structure is a single-span, rigid-connected Pratt pony truss with concrete deck and steel pile bent abutments. Aside from minor welding on the abutments, the bridge appears to be unaltered and has good integrity. County records do not provide a construction date, but the bridge's 19-foot roadway and 100-foot span suggest it was built ca. 1930.

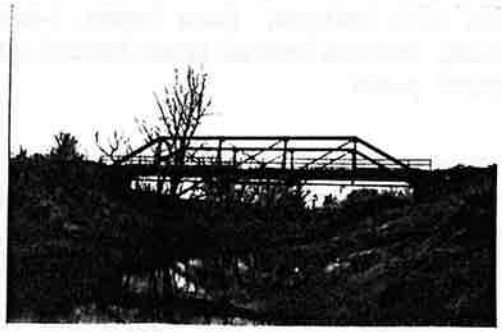
This structure is typical of many pony trusses built in Nebraska during the 1920s and 1930s.

NAME(S) OF STRUCTURE
Turkey Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006713420; Proceedings of the Pawnee County Commissioners, 1875-1930, located in Pawnee County Courthouse, Pawnee City, Nebraska; field inspection by Demian Hess, 24 January 1990.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Clear Creek Bridge
NDOR: C006713505

PAWN14

DATE(S) OF CONSTRUCTION
ca.1920

LOCATION
county highway over Clear Creek; S23/24, T3N, R11E
2.3 miles north, 2 miles west of Table Rock; Pawnee County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 22)

CONDITION
good

OWNER
Pawnee County

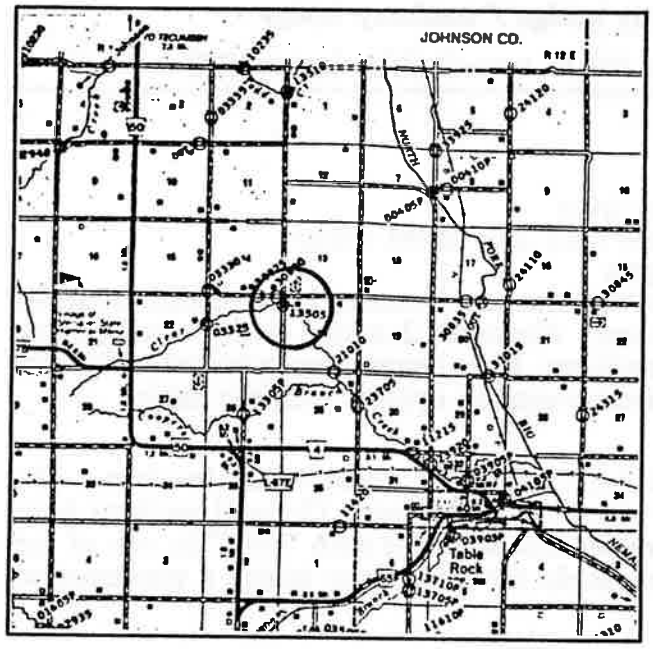
span number:	1	superstructure:	steel, 3-panel, rigid-connected Warren pony truss
span length:	45.0'	substructure:	bolted steel pile bent abutments with timber back and flared wings
total length:	46.0'	floor/decking:	double-layer wood deck over I-beam stringers
roadway wdt.:	13.6'	other features:	upper chord: back-to-back channels with cover plate and battens; lower chord: 2 angles with battens; vertical: 4 angles with battens; diagonal: 2 angles with battens; sway bracing: outriders formed by double angle sections; floor beam: I-beam bolted to bottom of vertical; bottom lateral: cross-braced circular-section eyerod; railing: lattice

This bridge carries a county road over Clear Creek on the line between Sections 23 and 24, T3N, R11E, Clear Creek Precinct. The structure is a single-span riveted Warren pony truss with angle-section outriders and steel pile bent abutments. Channel sections have been welded to the center panel diagonals, probably to increase the bridge's capacity. A welder inscribed the date "1987" in one of the channels in the east web. Due to the welding, the bridge has poor integrity. County records do not assign the bridge a construction date, but the narrow roadway width suggests it is ca.1920.

Although used as a standard highway truss type in many Midwestern states, the Warren truss was never adopted by the Nebraska Bureau of Roads and Bridges as a standard. Warren trusses are, therefore, uncommon in Nebraska. (Less than 50 have been identified by the statewide bridge inventory.) Unfortunately, welded alterations have compromised this structure's integrity and it is not eligible for the National Register.

NAME(S) OF STRUCTURE
Clear Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006713505; Proceedings of the Pawnee County Commissioners, 1875-1930, located in the Pawnee County Courthouse, Pawnee City, Nebraska; field inspection by Demian Hess, 24 January 1990.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Todd Creek Bridge
NDOR: C006713510

PAWN15

DATE(S) OF CONSTRUCTION
ca.1925

LOCATION
county highway over Todd Creek; S1/2, T3N, R11E
5.2 miles north, 2 miles west of Table Rock; Pawnee County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 22)

CONDITION
good

OWNER
Pawnee County

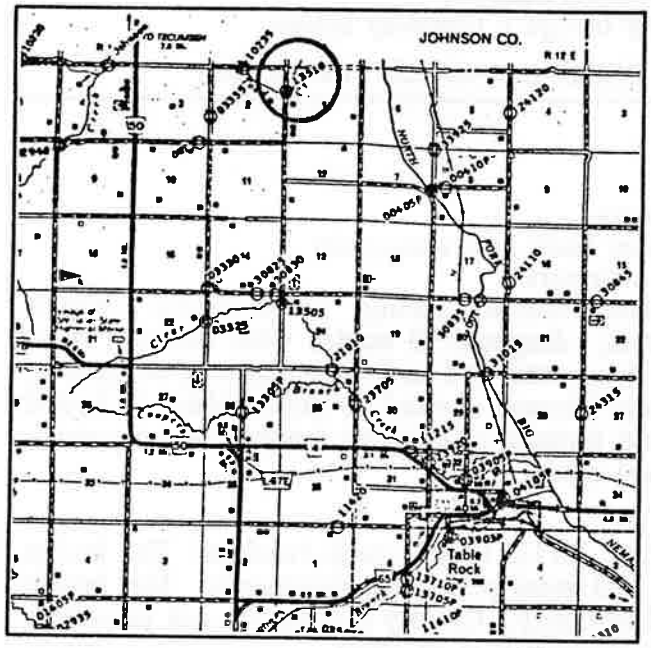
span number:	1	superstructure:	steel, 5-panel, rigid-connected Pratt pony truss
span length:	100.0'	substructure:	welded, steel pile bent abutments with timber back and wingwalls
total length:	102.0'	floor/decking:	concrete over steel plate deck with I-beam stringers
roadway wdt.:	17.1'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: 2 angles with battens; vertical: 4 angles with battens; diagonal: 2 angles with battens; sway bracing: solid plate riveted to end of floor beam and tied to top, outside of vertical by double angles to form outriders; floor beam: I-beam, riveted to angle which is bolted to gusset; gusset riveted to lower chord and bottom of vertical; bottom lateral: cross-braced circular-section eyerods; railing: steel cable

This bridge carries a county road over Todd Creek on the line between Sections 1 and 2, T3N, R11E, Clear Creek Precinct. The bridge is a single-span, riveted Pratt pony truss with outrider-type sway bracing, concrete deck, and steel pile bent abutments. The bridge abutments and deck have been rebuilt, but the truss appears to be unaltered and has good integrity. County records do not provide a construction date, but the bridge's relatively wide roadway width and 100-foot span length suggest it is ca.1925.

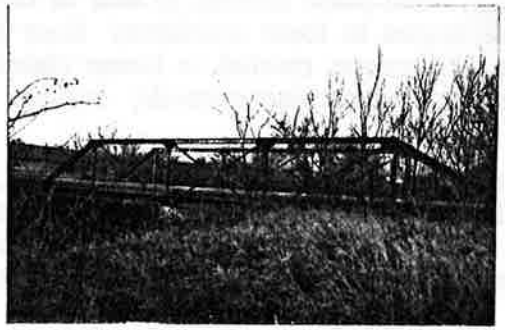
This structure is typical of many pony trusses built in Nebraska in the 1920s and 1930s.

NAME(S) OF STRUCTURE
Todd Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006713510; Proceedings of the Pawnee County Commissioners, 1875-1930, located in Pawnee County Courthouse, Pawnee City, Nebraska; field inspection by Demian Hess, 24 January 1990.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Big Nemaha River Bridge
NDOR: C006723840

PAWN16

DATE(S) OF CONSTRUCTION
ca.1925

LOCATION
county highway over the Big Nemaha River; S35, T1N, R12E
2 miles south, 0.5 miles east of Du Bois; Pawnee County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 20)

CONDITION
good

OWNER
Pawnee County

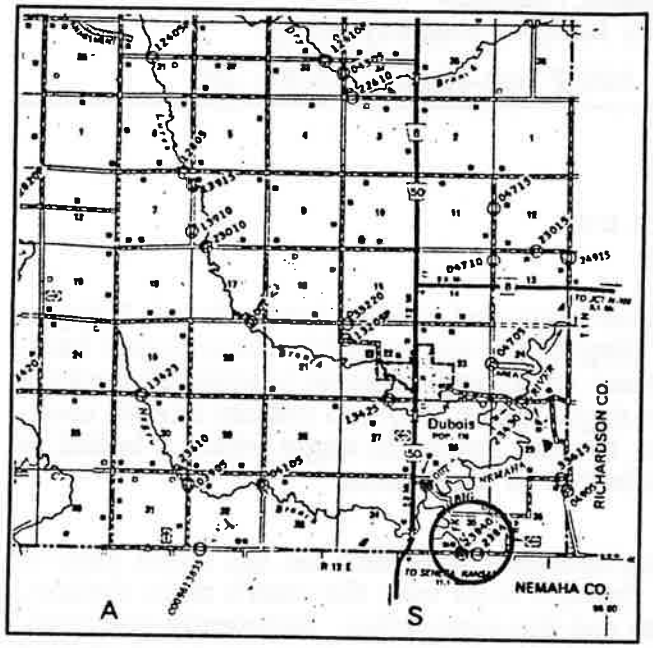
span number:	1	superstructure:	steel, 8-panel, rigid-connected Pratt through truss
span length:	140.0'	substructure:	welded, steel pile bent abutments and piers
total length:	230.0'	floor/decking:	wood deck over I-beam stringers
roadway wdt.:	15.2'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: 2 angles with battens; vertical: 4 angles with lacing; diagonal: 2 angles with battens; portal: back-to-back angles; sway bracing: top and bottom struts and diagonal bracing all back-to-back angles, intermediate vertical bracing is single angle; top and bottom lateral: cross-braced circular-section eyerods; floor beam: I-beam, riveted to angle which is bolted to bottom of vertical; railing: 2 channel rails bolted to angle posts

This bridge carries a county road over the Big Nemaha River. It is located on the Kansas/Nebraska state line, on the south edge of Section 35, T1N, R12E, South Fork Precinct. The structure a single rigid-connected Pratt through truss over the river's main channel, flanked on each side by a steel stringer approach span. Steel pile bent piers support the truss and the approaches. Apparently unaltered, the structure appears to be based on a state standardized plan which was used through the 1910s and 1920s. County records do not provide a construction date, but the bridge appears to date to ca.1925.

This structure is typical of many through trusses built in Nebraska in the 1920s.

NAME(S) OF STRUCTURE
Big Nemaha River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006723840; Proceedings of the Pawnee County Commissioners, 1875-1930, located in Pawnee County Courthouse, Pawnee City, Nebraska; State of Nebraska, "Standard Bridge Plan, 150 Foot Span, 8-Panel-High Truss-Riveted-Wood Floor," 1914, plan number 273, located in Bridge Division, Nebraska Department of Roads, Lincoln, Nebraska; field inspection by Demian Hess, 24 January 1990.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Cincinnati Bridge [Fries' Mill Bridge; Big Nemaha River Bridge] PAWN17
NDOR: C006733610P

DATE(S) OF CONSTRUCTION
1879-80

LOCATION
closed county road over the Big Nemaha River; S35, T1N, R12E
1 mile south, 0.2 miles east of Du Bois; Pawnee County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / abandoned

RATING NRHP eligible (score: 67)

CONDITION
fair (bridge abandoned)

OWNER
Pawnee County

span number:	1	superstructure:	wrought iron, 10-panel, bowstring through arch-truss
span length:	119.0'	substructure:	stone west abutment; steel pile east abutment; concrete-filled iron cylinder piers
total length:	unknown	floor/decking:	wood deck over timber stringers
roadway wdt.:	unknown	other features:	upper chord: back-to-back channels riveted to two solid plates; lower chord: 2 rectangular eyebars; vertical: cruciform-shaped section alternating with 2 angle sections tied by double lacing to form outriders; diagonal: round rod with threaded ends; strut: 2 angles with double lacing; top lateral: 4 eyerods, bolted to an iron collar at panel center; bottom lateral: cross-braced circular-section eyerods; railing: timber

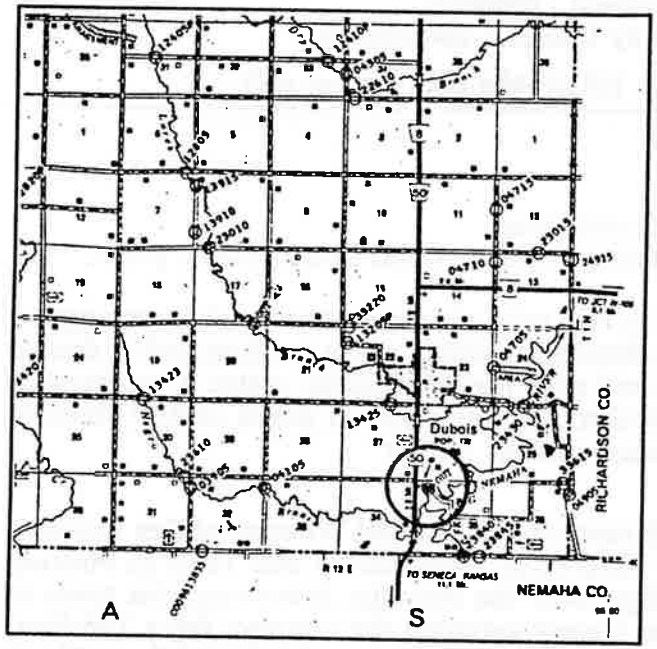
Pawnee County appears to have built its first iron bridge - a Pratt truss of unspecified length erected by King and Wheeler of Des Moines - in 1877. The King Iron Bridge Company of Cleveland erected the next all-iron bridges in 1878 (type unspecified) and 1879 (a 90-foot, bowstring arch-truss). In August 1879, the commissioners called for bids for an iron bridge over the Nemaha River near the town of Cincinnati (now gone), in the southeastern corner of the county. The following month the county awarded the contract for a 156-foot, two-span structure to the King Iron Bridge Company. The channel span featured a 119-foot bowstring arch-truss, fabricated from King's patented standard tubular arch design. The county paid King half of the bridge's cost in February 1880, and on March 4th, after examining the newly completed structure, accepted it from King. Total cost: $3,130.50. Although King raised the superstructure of the Cincinnati Bridge in 1882, little else is known about its history. (The original 37-foot approach span has evidently been replaced.) According to a local resident, the bridge was designated as part of the "Overland Ocean-Pikes Peak Trail" in the early 1900s. In 1982, the county closed the structure after determining that it did not meet the three-ton capacity required by federal standards. In 1985 the road leading to the bridge was vacated. Although now abandoned, the Cincinnati Bridge has retained a high degree of physical integrity.

Marketed widely throughout the Midwest by such industry giants as the King Iron Bridge Company and the Wrought Iron Bridge Company, bowstring arch-trusses were the mainstay bridge type for medium-span roadway crossings in the 1870s, 1880s and early 1890s. Numerous bowstrings were erected in eastern Nebraska during that period, but through subsequent attrition only a handful remains today. Most of these were erected by King in the 1880s and 1890s, and over half, like the Cincinnati Bridge, are now closed to traffic. The Cincinnati Bridge is historically significant as a regionally important crossing of the Nemaha River in southeastern Nebraska and one of the oldest originally placed vehicular bridges in the state. It is technologically significant as one of the last remaining examples in the state of this once-common, important early bridge types.

NAME(S) OF STRUCTURE

Cincinnati Bridge [Fries' Mill Bridge; Big Nemaha River Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES

Proceedings of the Pawnee County Commissioners, located at Pawnee County Courthouse, Pawnee City, Nebraska, refer to the following entries in Book 3: 28 May 1877 (p. 90), 3 July 1878 (p. 137), 6 August 1879 (pp. 169-170), 2 September 1879 (p. 171), 5 February 1880 (p. 185), 3 March 1880 (p. 186), 4 March 1880 (p. 186); Demian Hess, interview with Charlie Morin, Pawnee County Highway Superintendent, 25 January 1990; Demian Hess, telephone interview with Ed Bohm, Pawnee City resident, 9 April 1990; King Iron Bridge and Manufacturing Company, published catalog, ca.1888, n.p., located at Ohio State Historical Society, Columbus, Ohio; field inspection by Demian Hess, 26 January 1990.

INVENTORIED BY

Demian Hess

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Spring Creek Bridge
NDOR: C006903805P

PHEL01

DATE(S) OF CONSTRUCTION
1912

LOCATION
county road over Spring Creek; S9, T5N, R20W
6.7 miles southwest of Loomis; Phelps County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 36)

CONDITION
fair

OWNER
Phelps County

span number: 1
span length: 60.0'
total length: 117.0'
roadway wdt.: 15.8'

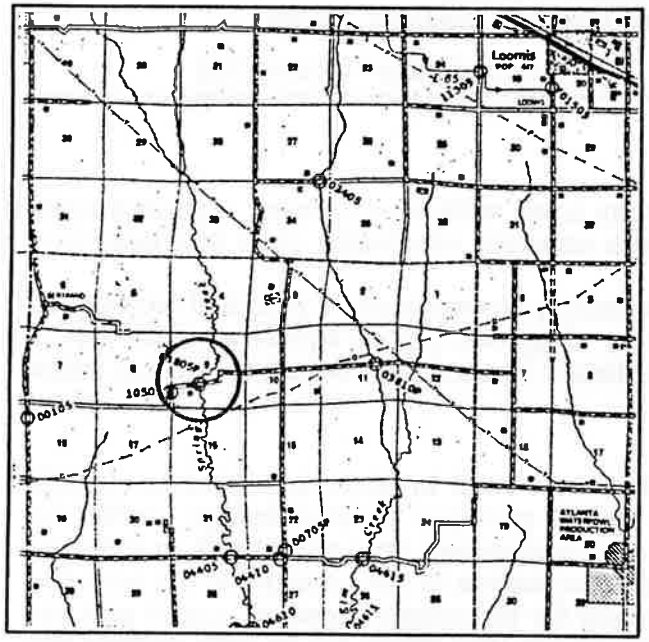
superstructure: steel, 4-panel, pin- / rigid-connected Pratt pony truss, with steel stringer approach spans
substructure: steel pile abutments encased in concrete, with concrete wingwalls; steel pile bent piers
floor/decking: timber decking over steel I-beam stringers
other features: upper chord: 2 channels with cover plate and lacing; lower chord: 2 punched rectangular eyebars; vertical: 4 angles with batten plates; diagonal: looped square eyebar; lateral bracing: round bar with threaded ends; floor beam: I-beam, field bolted to vertical below lower chord; guardrail: 2 angles

In September 1910 the Phelps County Board of Supervisors received a citizens' petition for a new road in sparsely settled Rock Falls Township, in the southwest corner of the county. The supervisors agreed, instructing the county surveyor to draw bridge profiles for three branches of Spring Creek traversed by the proposed route. County Road 16, as it was designated, was completed in October. Construction of a new courthouse in Holdrege in 1910-11, however, effectively halted bridge construction in the county for the next two years. In January 1912 the board adopted bridge designs by the Omaha Structural Steel Company for the county standard, and it solicited competitive proposals for an annual bridge contract. Unsurprisingly, Omaha Steel offered the lowest unit prices for its own designs and was awarded the contract. Among the structures built by the firm in Phelps County that year were two small-scale pony trusses on County Road 16: this 60-foot span with steel stringer approach spans and a 40-foot span a half mile west (**PHEL03**). Superstructure cost: $15.00 per foot for the 40-foot truss and $16.10 per foot for the 60-foot truss, both with steel stringers. The bridges were completed in May; both have survived intact on this lightly trafficked county road.

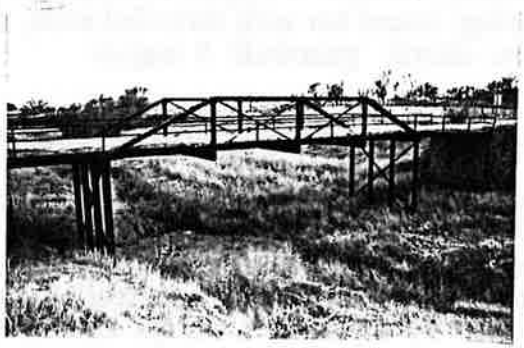
The pin-connected Pratt pony truss was used as a standard short-span design by the Nebraska State Engineer as well as virtually all of the in-state bridge companies in the early 1900s. As a result, thousands of Pratt ponies were erected across the state, and today they represent the most populous truss type. Built in 1912 by one of the state's most prolific bridge contractors, the Spring Creek Bridge is a typical example of this common vehicular bridge type.

NAME(S) OF STRUCTURE
Spring Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006903805P; Proceedings of the Phelps County Board of Supervisors, Book 7: 6 September 1910 (page 100), 18 October 1910 (page 103), 23 January 1912 (page 149), 27 February 1912 (page 151), 21 May 1912 (pages 155-56), located at Phelps County Courthouse, Holdrege, Nebraska; original stream profile drawn by P.O. Billing, 14 September 1910, located at Phelps County Clerk's Office, County Courthouse, Holdrege, Nebraska ; proposal and contract by Omaha Structural Steel Works, 27 February 1912; correspondence from Omaha Structural Steel Works to Phelps County, 27 February 1912, located at Phelps County Clerk's Office, County Courthouse, Holdrege, Nebraska; field inspection by Clayton Fraser, 30 March 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Spring Creek Bridge
NDOR: C006904610

PHEL02

DATE(S) OF CONSTRUCTION
1907

LOCATION
county road over Spring Creek; S27/28, T5N, R20W
8.8 miles southwest of Loomis; Phelps County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 43)

CONDITION
fair

OWNER
Phelps County

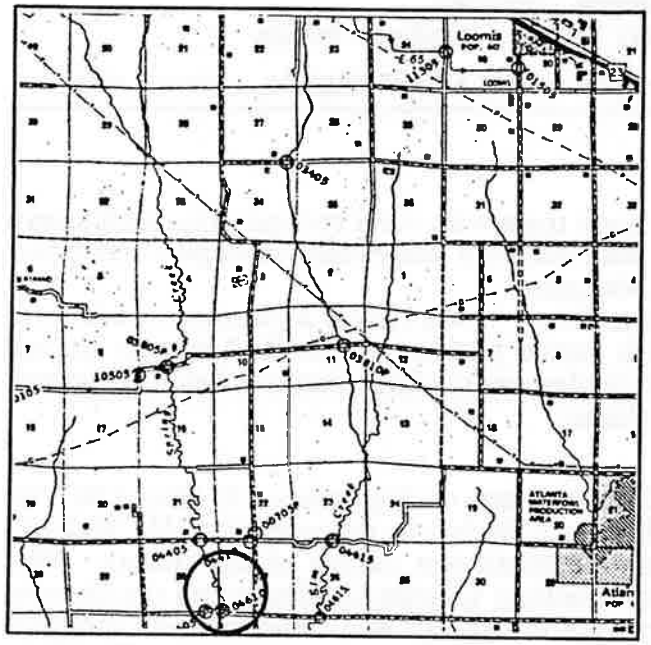
span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt half-hip pony truss with steel stringer approach spans
span length:	60.0'	substructure:	steel pile abutments embedded in concrete with concrete wingwalls; steel pile bent piers
total length:	91.0'	floor/decking:	corrugated steel decking over steel I-beam stringers
roadway wdt.:	16.0'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 punched and looped rectangular eyebars; vertical: 4 angles with batten plates; diagonal: 2 square looped eyebars; lateral bracing: round bar with threaded ends; floor beam: I-beam, U-bolted to lower chord pin at vertical; guardrail: timber

Thomas L. Roberts, representative of the Standard Bridge Company, visited the Phelps County Board of Supervisors in May 1907 to present standard plans and specifications for bridges. The supervisors at that time asked Standard Bridge to prepare plans for 36-foot, 40-foot and 60-foot spans, all to be located in Rock Falls Township in the sparsely populated southwest corner of the county. The following month the board received competitive proposals for the three structures from six contractors: Charles G. Sheely and the Denver Bridge Company of Denver, William A. Lana, and the Western Contractors' Supply Company, Western Bridge and Construction Company and the Standard Bridge Company of Omaha. The low bidder, Standard Bridge was awarded the construction contract. The firm completed all three structures, including this 60-foot pony truss over Spring Creek, by December 1907. The truss was supported by steel H-pile piers made up of riveted channels, with steel pile abutments encased in concrete. The Spring Creek Bridge still carries intermittent traffic. Its timber deck has been replaced with corrugated steel, but the bridge remains otherwise intact.

Robert Zale Drake, proprietor of the Standard Bridge Company, reportedly developed a new steel pile bent configuration for bridge substructures around 1903. Consisting of a 5-inch channel riveted to the backs of two 8-inch channels, the built-up H-piles, as they were termed, largely replaced the use of steel cylinder piers in Nebraska They won overwhelming acceptance (used in 95 per cent of the state's bridges, by one report) among county engineers and in-state bridge companies. The built-up piles were superseded by rolled H sections within ten years, and over the next twenty years some 15,000 bridges were constructed in the state using variations of Drake's H-piling. Although the pinned pony truss of the Spring Creek Bridge is unremarkable as a typical example of a relatively common structural type, the bridge is significant as one of the earliest and best-preserved examples remaining in the state of an original Standard Bridge Company built-up H-pile substructure.

NAME(S) OF STRUCTURE
Spring Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006904610; Proceedings of the Phelps County Board of Supervisors, Book 7: 14 May 1907 (page 3), 14 June 1907 (page 6), 12 November 1907 (page 14), 10 December 1907 (page 17), located at Phelps County Courthouse, Holdrege, Nebraska; Ted Johnson, "Discussion of Steel Foundations for Steel Bridges Constructed in the Missouri River Valley," **Nebraska Blue Print** 26 (February 1927), 11-12; field inspection by Clayton Fraser, 30 March 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C006910505

PHEL03

DATE(S) OF CONSTRUCTION
1912

LOCATION
county road over Spring Creek branch; S8/9, T5N, R20W
7.1 miles southwest of Loomis; Phelps County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 33)

CONDITION
fair

OWNER
Phelps County

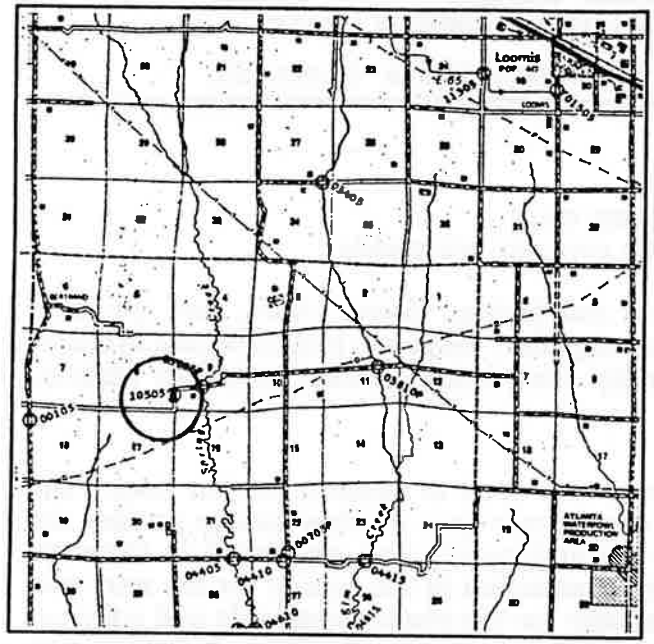
span number:	1	superstructure:	steel, 3-panel, pin- / rigid-connected Pratt pony truss
span length:	40.0'	substructure:	steel pile abutments encased in concrete with concrete wingwalls
total length:	41.0'	floor/decking:	corrugated steel decking on steel stringers
roadway wdt.:	15.8'	other features:	upper chord: 2 channels with covered plate and lacing; lower chord: two punched rectangular eyebar; vertical: 4 angles with batten plates; diagonal: looped square eyebars; lateral bracing: round bar with threaded ends; floor beam: I-beam bolted to vertical; guardrail: 2 angles

In September 1910 the Phelps County Board of Supervisors received a citizens' petition for a new road in sparsely settled Rock Falls Township, in the southwest corner of the county. The supervisors agreed, instructing the county surveyor to draw bridge profiles for three branches of Spring Creek traversed by the proposed route. County Road 16, as it was designated, was completed in October. Construction of a new courthouse in Holdrege in 1910-11, however, effectively halted bridge construction in the county for the next two years. In January 1912 the board adopted bridge designs by the Omaha Structural Steel Company for the county standards and solicited competitive proposals for an annual bridge contract. Unsurprisingly, Omaha Steel offered the lowest unit prices for its own designs and was awarded the contract. Among the structures built by the firm in Phelps County that year were two small-scale pony trusses on County Road 16: this 40-foot span and a 60-foot span (**PHEL01**) a half mile east. Superstructure cost: $15.00 per foot for the 40-foot truss and $16.10 per foot for the 60-foot truss, both with steel stringers. The bridges were completed in May. Both have survived intact on this lightly trafficked road, with the deck replacement on the 40-foot truss the only alteration of note.

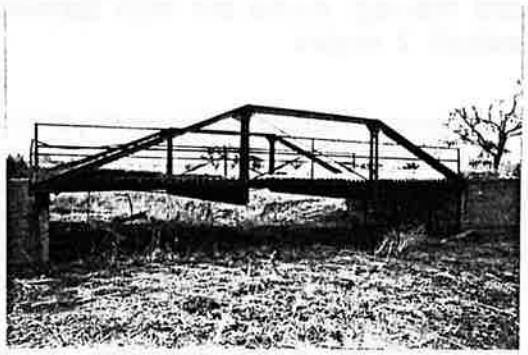
This bridge typifies short-span truss construction in Nebraska in the 1910s. Built by one of the state's major bridge erectors during a period of intense bridge construction activity, it fits well within the milieu of technological trends for the period. The bridge has suffered alteration in the replacement of its floor system, but is otherwise intact. Lacking any major historical significance at this remote crossing and typifying an exceedingly common structural type in Nebraska, this bridge appears to lack an appreciable level of significance.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C006910505; Proceedings of the Phelps County Board of Supervisors, Book 7: 6 September 1910 (page 100), 18 October 1910 (page 103), 23 January 1912 (page 149), 27 February 1912 (page 151), 21 May 1912 (pages 155-56), located at Phelps County Courthouse, Holdrege, Nebraska; original stream profile drawn by P.O. Billing, 14 September 1910, located at Phelps County Clerk's Office, County Courthouse, Holdege, Nebraska ; proposal and contract by Omaha Structural Steel Works, 27 February 1912; correspondence from Omaha Structural Steel Works to Phelps County, 27 February 1912, located at Phelps County Clerk's Office, County Courthouse, Holdrege, Nebraska; field inspection by Clayton Fraser, 30 March 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Elkhorn River Bridge PIER01
NDOR: C007000805

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over North Fork of the Elkhorn River; S15/22, T28N, R3W
4.5 miles northwest of Osmond; Pierce County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 27)

CONDITION
good

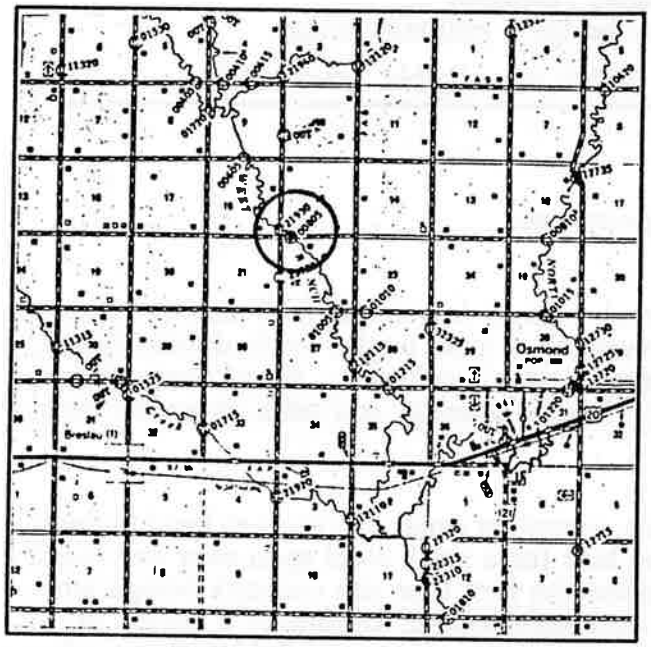
OWNER
Pierce County

span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt half-hip pony truss
span length:	50.0'	substructure:	concrete abutments
total length:	51.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.5'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 looped eyebars (center panels), eyerods (outer panels); vertical: 2 pair angles with double lacing; diagonal: looped eyebars; counter: looped eyebar with turnbuckle; floor beam: I-beam, field bolted to vertical below lower chord; lateral bracing: rod with threaded ends; guardrail: removed

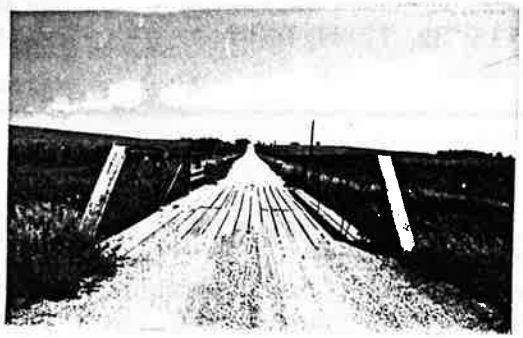
Until 1905 Pierce County apparently limited its bridge construction to modest timber pile spans, awarding small contracts to local builders for these structures. In October 1905 the Pierce County Commissioners solicited competitive bids for a small steel span over the North Fork of the Elkhorn River, about six miles northwest of the county seat of Pierce. This marked the first time the county's bridge work attracted large bridge contractors. The Canton Bridge Company of Canton, Ohio, was the successful bidder, beginning a period of 13 years during which Pierce County awarded virtually all of its bridge construction contracts to the giant midwestern bridge firm. After that first contract the county commissioners awarded a series of annual contracts to Canton on the basis of unit prices for various bridge types and individual components. Canton received Pierce County's annual bridge contracts each year through 1918, despite bidding against several other firms prominent in the state and the region. Around 1910, Canton erected this small-scale truss over a branch of the North Fork of the Elkhorn River on the line between Sections 15/22, T28N, R3W, northwest of Osmond. Configured as a pin-connected Pratt half-hip pony truss, the bridge fits well within the technological trends of the period. The Elkhorn River Bridge has carried traffic to the present in essentially unaltered condition.

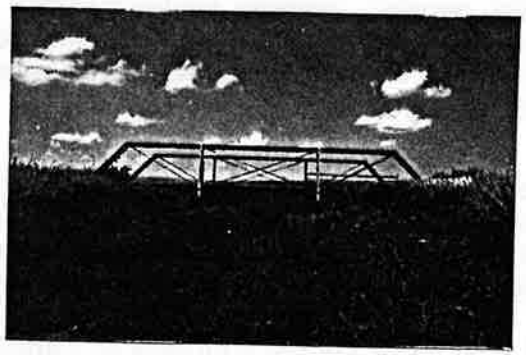
NAME(S) OF STRUCTURE
Elkhorn River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C007000805; Pierce County Commissioners' Record, Books 3 - 5, covering the period 1899 to 1919; field inspection by Fred Quivik, 26 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Willow Creek Bridge
NDOR: C007001705

PIER02

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over Willow Creek; S32/33, T26N, R3W
8.0 miles west of Pierce; Pierce County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 27)

CONDITION
good

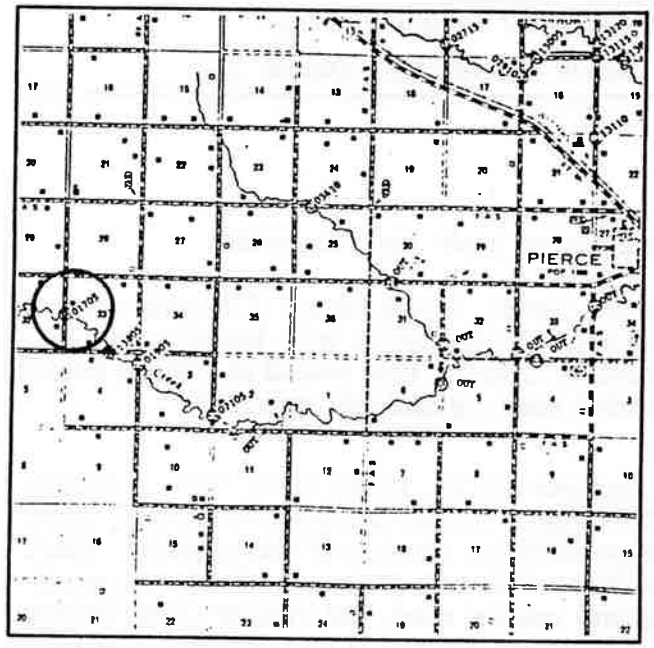
OWNER
Pierce County

span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt half-hip pony truss
span length:	50.0'	substructure:	steel pile bent and steel cylinder piers with concrete back- and wingwalls
total length:	66.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.8'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 looped eyebars (center panel), 2 eyerods (outer panels); vertical: 2 pair angles with lacing; diagonal: looped eyebars; counter: square rods; floor beam: I-beam, field bolted to vertical below lower chord; lateral bracing: rod with threaded ends; guardrail: removed

This small-scale truss carries a gravel-surfaced road over Willow Creek on the line between Sections 32/33, T26N, R3W, west of Pierce. Configured as a pin-connected Pratt half-hip pony truss, the bridge was built circa 1910. The Canton Bridge Company of Canton, Ohio, held Pierce County's annual bridge building contract between 1905 and 1918, and is likely responsible for erection of this crossing. Since its completion, the bridge has served to carry vehicular traffic in this rural Pierce County location. It is one of thousands of such small-scale, pinned pony trusses erected across Nebraska in the early 1900s. Located on a secondary county road, the Willow Creek Bridge has played only a marginal role in the development of eastern Nebraska transportation.

NAME(S) OF STRUCTURE
Willow Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C007001705; Pierce County Commissioners' Record, Books 3 - 5, covering the period 1899 to 1919; field inspection by Fred Quivik, 26 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Dry Creek Bridge
NDOR: C007001705P

PIER03

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over Dry Creek; S28/33, T27N, R3W
8.0 miles southeast of Plainview; Pierce County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 27)

CONDITION
good

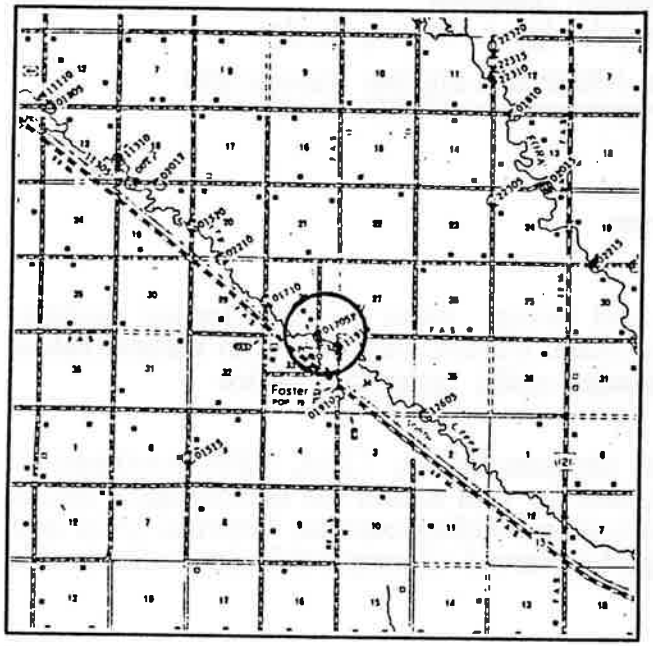
OWNER
Pierce County

span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt pony truss
span length:	50.0'	substructure:	concrete abutments
total length:	51.0'	floor/decking:	concrete deck over I-beam stringers
roadway wdt.:	15.9'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 looped eyebars; vertical: 2 angles with double lacing; floor beam: I-beam, field bolted to vertical below lower chord; lateral bracing: rod with threaded ends; guardrail: lattice

This small-scale truss carries a gravel-surfaced road over Dry Creek on the line between Sections 28/33, T27N, R3W, southeast of Plainview. Configured as a pin-connected Pratt pony truss, the bridge was built circa 1910, and fits well within the technological trends of the period. The Canton Bridge Company of Canton, Ohio, held Pierce County's annual bridge building contract between 1905 and 1918, and is likely responsible for erection of this crossing. Since its completion, the bridge has served to carry vehicular traffic in this rural Pierce County location.

NAME(S) OF STRUCTURE
Dry Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C007001705P; Pierce County Commissioners' Record, Books 3 - 5, covering the period 1899 to 1919; field inspection by Fred Quivik, 26 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Yankton Slough Bridge
NDOR: C007001820

PIER04

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over Yankton Slough; S9/16, T27N, R1W
4.5 miles south-southeast of McLean; Pierce County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 29)

CONDITION
good

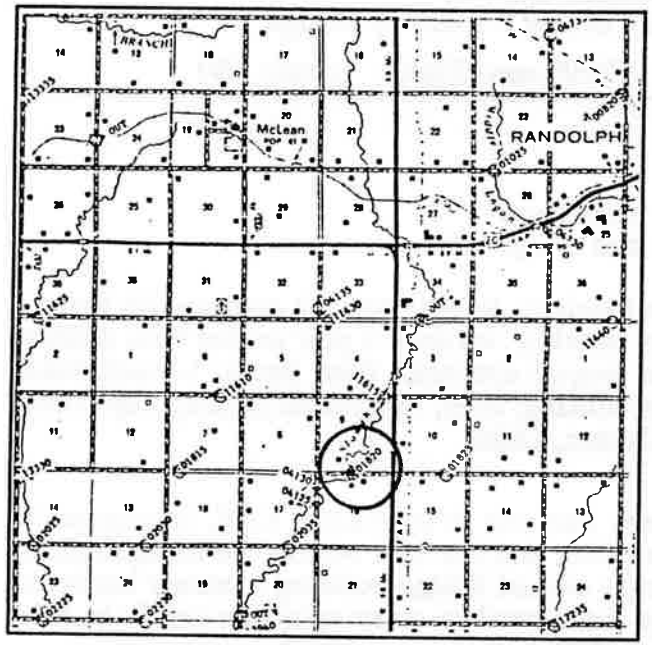
OWNER
Pierce County

span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt half-hip pony truss
span length:	44.0'	substructure:	steel H-pile abutments with concrete back- and wingwalls
total length:	46.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.6'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 angles with batten plates (outer panels), looped eyebars (center panels); vertical: 2 pair angles with double lacing; diagonal: looped eyebars; counter: looped eyebars; floor beam: I-beam, field bolted to vertical below lower chord; lateral bracing: rods; guardrail: lattice; hip block builder's plate: **Canton Bridge Company, Canton, Ohio.**

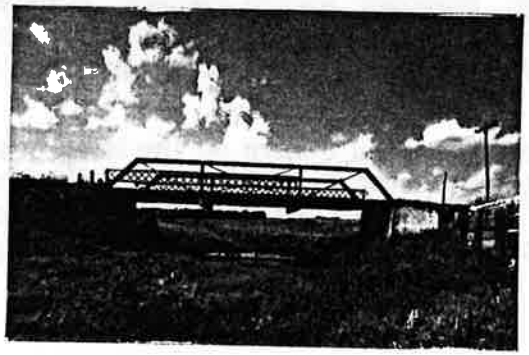
This small-scale truss carries a gravel-surfaced road over Yankton Slough on the line between Sections 9/16, T27N, R1W, southeast of McLean. Configured as a half-hip, pin-connected Pratt pony truss, the bridge was built circa 1910, and fits well within the technological trends of the period. The Canton Bridge Company of Canton, Ohio, which held Pierce County's annual bridge building contract between 1905 and 1918, is responsible for erection of this crossing. Since its completion, the bridge has served to carry vehicular traffic in this rural Pierce County location.

NAME(S) OF STRUCTURE
Yankton Slough Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C007001820; Pierce County Commissioners' Record, Books 3 - 5, covering the period 1899 to 1919; builder's plate on bridge; field inspection by Fred Quivik, 26 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Elkhorn River Bridge PIER05
NDOR: C007002215

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over North Fork of the Elkhorn River; S19/30, T27N, R2W
6.0 miles southwest of Pierce; Pierce County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING determined NRHP eligible (score: 31)

CONDITION
good

OWNER
Pierce County

span number: 1
span length: 50.0'
total length: 51.0'
roadway wdt.: 15.6'

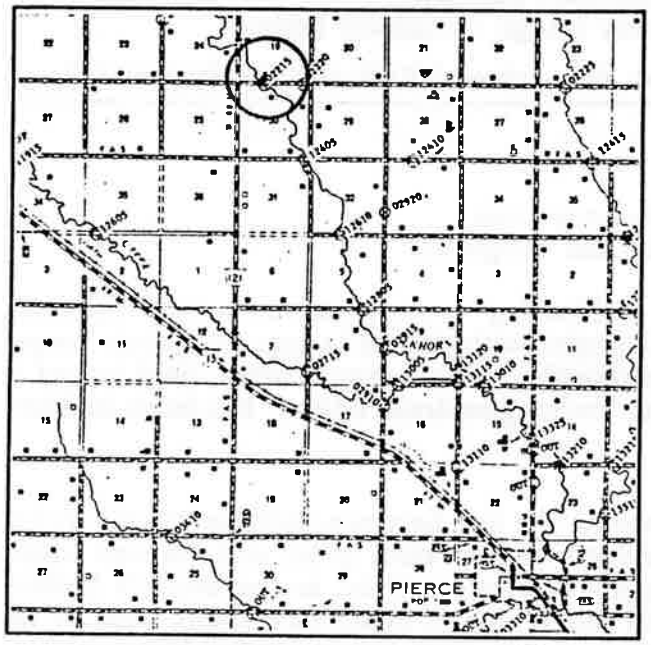
superstructure: steel, 3-panel, pin-connected Pratt half-hip pony truss
substructure: steel H-pile abutments with concrete back- and wingwalls
floor/decking: timber deck over I-beam stringers
other features: upper chord: 2 channels with cover plate and lacing; lower chord: rods (outer panels), looped eyebars (center panel); vertical: 2 angles with double lacing; diagonal: looped eyebars; counter: looped eyebar with turnbuckle; floor beam: I-beam, field bolted to vertical below lower chord; lateral bracing: rods; guardrail: lattice; hip block builder's plate: **Canton Bridge Co.**

This small-scale truss carries a gravel-surfaced road over the North Fork of the Elkhorn River on the line between Sections 19/30, T27N, R2W, southwest of Pierce. Configured as a half-hip, pin-connected Pratt pony truss, the bridge was built circa 1910, and fits well within the technological trends of the period. A bridge plate identifies the Canton Bridge Company of Canton, Ohio, as the bridge's builder. Canton held Pierce County's annual bridge building contract between 1905 and 1918, and this is one of many such spans built by the firm during this period. Since its completion, the bridge has served to carry vehicular traffic in this rural Pierce County location.

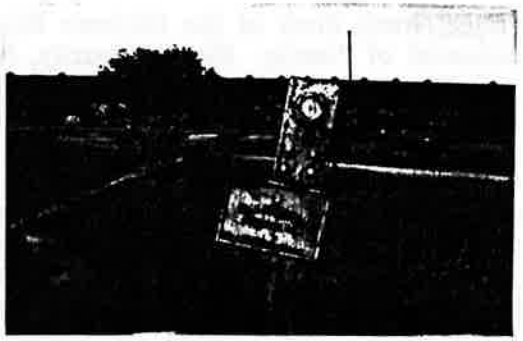
Of the bridges surveyed in Pierce County, twelve are Pratt half-hip trusses with spans ranging from 45 to 60 feet. Designed and fabricated by the Canton Bridge Company, the 45-foot and 50-foot trusses are typically comprised of three panels; the 60-foot spans have four panels. Other than minor differences in the composition of the lower chords, all the half-hip trusses in the county are identical. In well-preserved condition and with its ornamentation intact, the Elkhorn River Bridge typifies this construction trend.

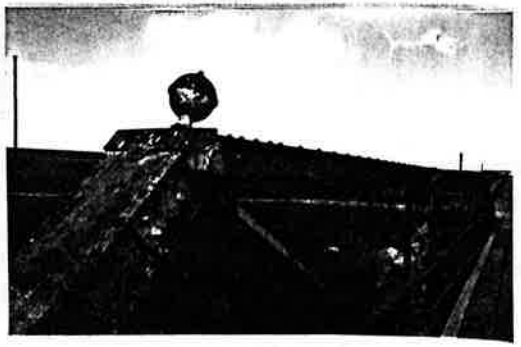
NAME(S) OF STRUCTURE
Elkhorn River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C007002215; Pierce County Commissioners' Record, Books 3 - 5, covering the period 1899 to 1919; builder's plate on bridge; field inspection by Fred Quivik, 26 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Elkhorn River Bridge PIER06
NDOR: C007004105

DATE(S) OF CONSTRUCTION
ca.1920

LOCATION
county road over North Fork of the Elkhorn River; S20/21, T25N, R1W
1.2 miles north of Hadar; Pierce County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 22)

CONDITION
good

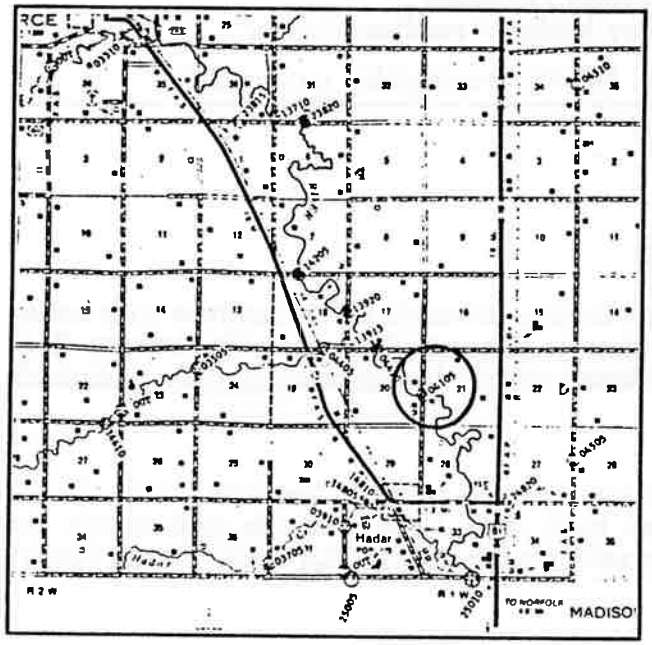
OWNER
Pierce County

span number:	1	superstructure:	steel, 4-panel, riveted Pratt pony truss
span length:	80.0'	substructure:	steel H-pile bent piers; concrete abutments
total length:	130.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.7'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 channels with batten plates; vertical: 2 pair angles with batten plates; diagonal: 2 angles with battens; floor beam: I-beam, filed bolted to vertical below lower chord; lateral bracing: rods; guardrail: 2 angles

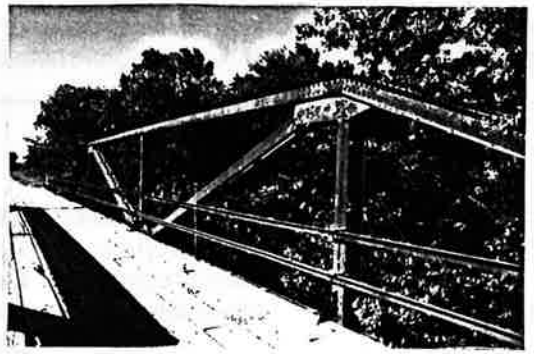
This small-scale truss carries a gravel-surfaced road over the North Fork of the Elkhorn River on the line between Sections 20/21, T25N, R1W, north of Hadar. Configured as a rigid-connected Pratt pony truss, the bridge was built circa 1920, and fits well within the technological trends of the period. Since its completion, the bridge has served to carry vehicular traffic in this rural Pierce County location.

NAME(S) OF STRUCTURE
Elkhorn River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C007004105; Pierce County Commissioners' Record, Books 3 - 5, covering the period 1899 to 1919; field inspection by Fred Quivik, 27 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Elkhorn River Bridge PIER07
NDOR: C007004410

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over North Fork of Elkhorn River; S17/20, T25N, R1W
1.7 miles north of Hadar; Pierce County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 34)

CONDITION
excellent

OWNER
Pierce County

span number: 1
span length: 80.0'
total length: 82.0'
roadway wdt.: 15.6'

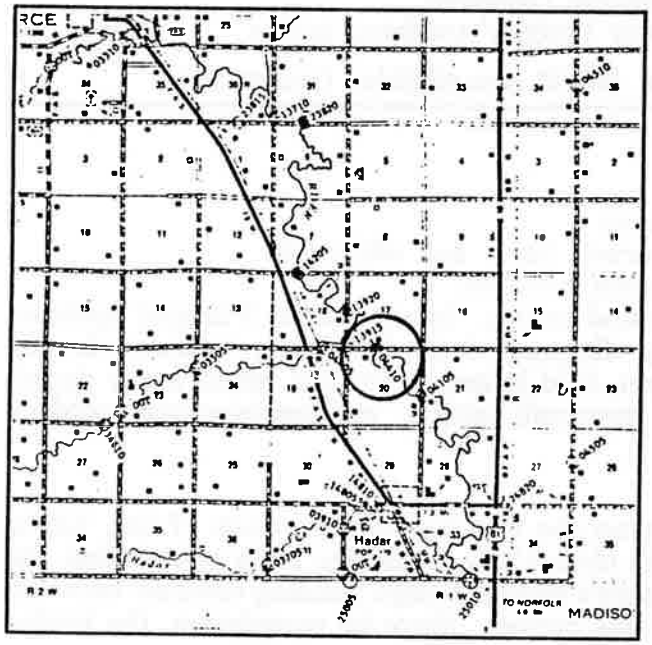
superstructure: steel, 5-panel, pin-connected Pratt pony truss
substructure: concrete-filled steel cylinder piers with concrete back- and wingwalls
floor/decking: gravel over corrugated steel deck with I-beam stringers
other features: upper chord: 2 channels with cover plate and lacing; lower chord: 2 looped eyebars; vertical: 2 pair angles with double lacing; diagonal: looped eyebars; counter: looped eyebar with turnbuckle; floor beam: I-beam, field bolted to vertical below lower chord; lateral bracing: rod with threaded ends; guardrail: lattice; endpost-mounted builder's plate: **Canton Bridge Co.**

This small-scale truss carries a gravel-surfaced road over the North Fork of Elkhorn River on the line between Sections 17/20, T25N, R1W, north of Hadar. Configured as a pin-connected Pratt pony truss, the bridge was built circa 1910. A bridge plate reveals that the structure was built by the Canton Bridge Company of Canton, Ohio. Canton held Pierce County's annual bridge building contract between 1905 and 1918, and this bridge was one of many such spans erected by the firm during this period. Since its completion, the bridge has served to carry vehicular traffic in this rural Pierce County location.

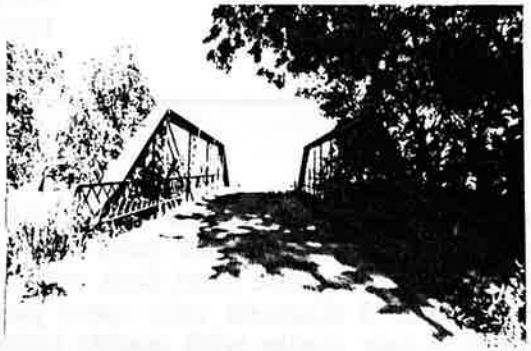
NAME(S) OF STRUCTURE

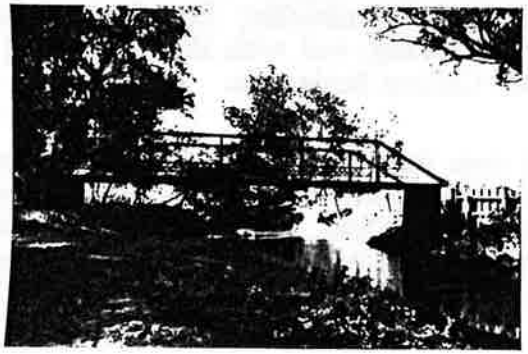
North Fork of Elkhorn River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C007004410; Pierce County Commissioners' Record, Books 3 - 5, covering the period 1899 to 1919; builder's plate on bridge; field inspection by Fred Quivik, 27 July 1989.

INVENTORIED BY

Lon Johnson, Renewable Technologies, Inc.

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C007004525

PIER08

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over unnamed stream; S2/3, T26N, R1W
7.0 miles northeast of Pierce; Pierce County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 29)

CONDITION
good

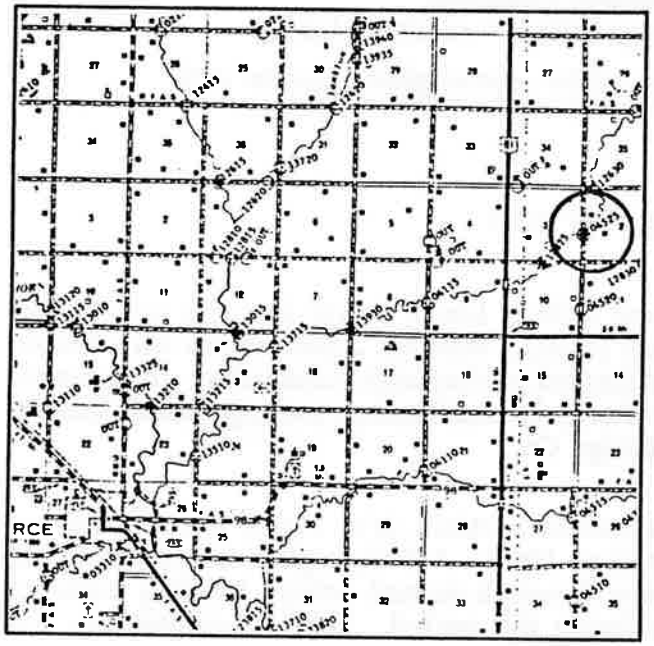
OWNER
Pierce County

span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt half-hip pony truss
span length:	50.0'	substructure:	concrete abutments
total length:	51.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.5'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 angles with batten plates (outer panels), looped eyebars (center panel); vertical: 2 pair angles with double lacing; diagonal: looped eyebars; counter: looped eyebar with turnbuckle; floor beam: I-beam, field bolted to vertical below lower chord; lateral bracing: rods; guardrail: lattice; endpost-mounted builder's plate: **Canton Bridge Co.**

This small-scale truss carries a gravel-surfaced road over an unnamed stream on the line between Sections 2/3, T26N, R1W, northeast of Pierce. Configured as a pin-connected Pratt half-hip pony truss, the bridge was built circa 1910. A bridge plate reveals that the structure was built by the Canton Bridge Company of Canton, Ohio. Canton held Pierce County's annual bridge building contract between 1905 and 1918, and this bridge was one of many such spans erected by the firm during this period. Since its completion, the bridge has served to carry vehicular traffic in this rural Pierce County location.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C007004525; Pierce County Commissioners' Record, Books 3 - 5, covering the period 1899 to 1919; field inspection by Fred Quivik, 26 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Dry Creek Bridge
NDOR: C007011310

PIER09

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over Dry Creek; S13/18, T27N, R4/3W
4.0 miles southeast of Plainview; Pierce County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 27)

CONDITION
good

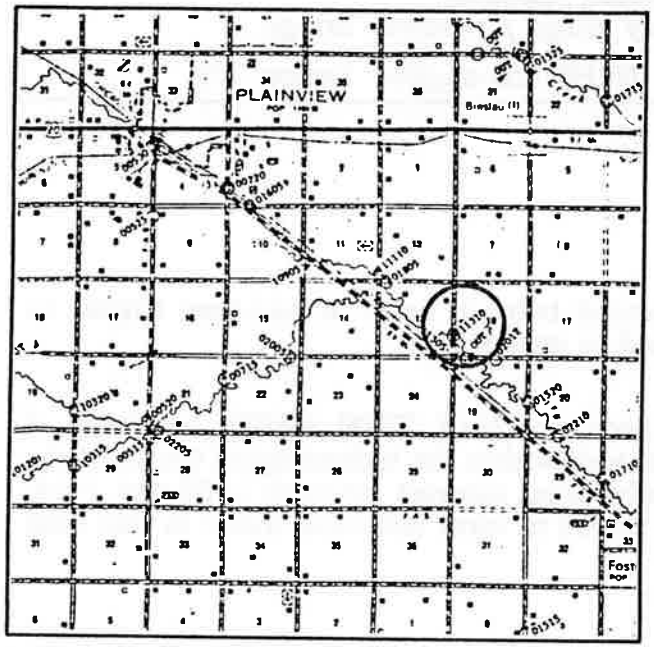
OWNER
Pierce County

span number:	1	superstructure:	steel stringer
span length:	32.0'	substructure:	steel H-pile abutments
total length:	34.0'	floor/decking:	concrete deck over steel stringers
roadway wdt.:	16.0'	other features:	floor beam: 6 I-beam, channels (outer); lateral bracing: angle at mid-span clipped to bottom flange; guardrail: 3 channels welded to angles

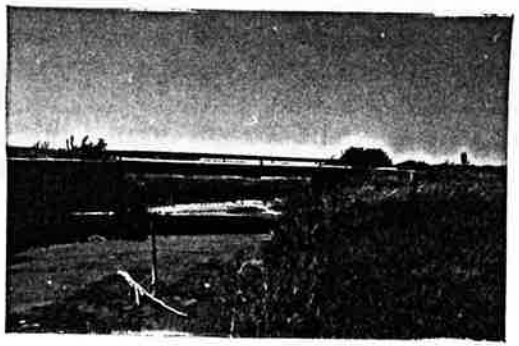
This small-scale bridge carries a gravel-surfaced road over Dry Creek on the line between Sections 13/18, T27N, R4/3W, southeast of Plainview. A simply-configured steel stringer span, the bridge was built circa 1910, and fits well within the technological trends of the period. The Canton Bridge Company of Canton, Ohio, held Pierce County's annual bridge building contract between 1905 and 1918, and is likely responsible for erection of this crossing. Since its completion, the bridge has served to carry vehicular traffic in this rural Pierce County location.

NAME(S) OF STRUCTURE
Dry Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C007011310; Pierce County Commissioners' Record, Books 3 - 5, covering the period 1899 to 1919; field inspection by Fred Quivik, 26 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Dry Creek Bridge
NDOR: C007011915

PIER10

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over Dry Creek; S33/34, T27N, R3W
west edge of Foster; Pierce County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 27)

CONDITION
good

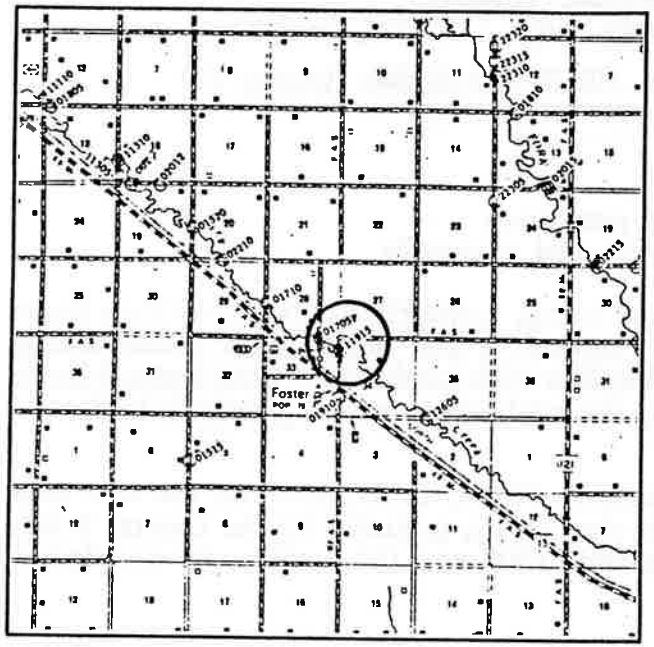
OWNER
Pierce County

span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt half-hip pony truss
span length:	50.0'	substructure:	steel pile bent abutments with concrete back- and wingwalls
total length:	51.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.9'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: looped eyerods (outer panels), looped eyebars (center panels); vertical: 2 pair angles with double lacing; diagonal: looped eyebars; counter: looped eyebar with turnbuckle; floor beam: I-beam, field bolted to vertical below lower chord; lateral bracing: rods; guardrail: lattice

This small-scale truss carries a gravel-surfaced road over Dry Creek on the line between Sections 33/34, T27N, R3W, on the west edge of Foster. Configured as a half-hip, pin-connected Pratt pony truss, the bridge was built circa 1910, probably by the Canton Bridge Company of Canton, Ohio, which held Pierce County's annual bridge building contract between 1905 and 1918. Since its completion, the bridge has served to carry vehicular traffic in this Pierce County location.

NAME(S) OF STRUCTURE
Dry Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C007011915; Pierce County Commissioners' Record, Books 3 - 5, covering the period 1899 to 1919; field inspection by Fred Quivik, 26 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge PIER11
NDOR: C007012430

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over unnamed stream; S25/36, T27N, R1W
8.5 miles northeast of Pierce; Pierce County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 27)

CONDITION
good

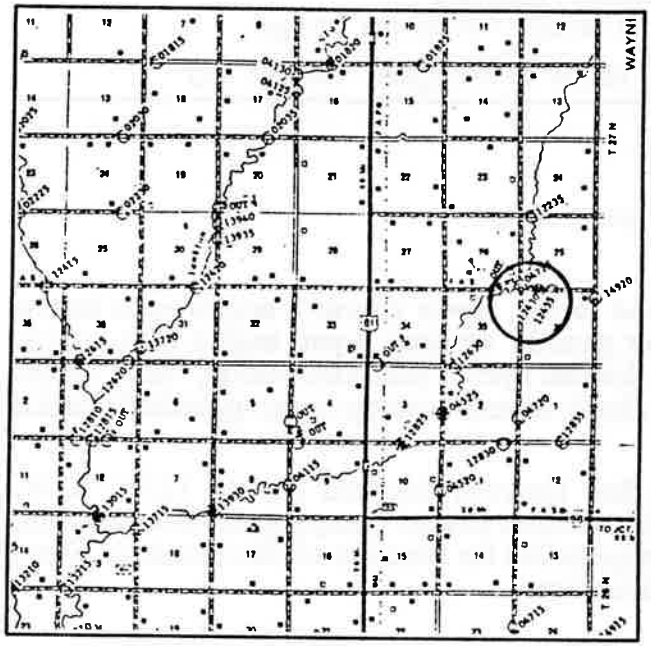
OWNER
Pierce County

span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt half-hip pony truss
span length:	45.0'	substructure:	concrete abutments
total length:	46.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.8'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 angles with batten plates (outer panels), looped eyebars (center panel); vertical: 2 pair angles with double lacing; diagonal: looped eyebars; counter: looped eyebar with turnbuckle; floor beam: I-beam, field bolted to vertical below lower chord; lateral bracing: rods; guardrail: lattice

This small-scale truss carries a gravel-surfaced road over an intermittent stream on the line between Sections 25/36, T27N, R1W. Configured as a pin-connected Pratt half-hip pony truss, the bridge was built circa 1910. The Canton Bridge Company of Canton, Ohio, held Pierce County's annual bridge building contract between 1905 and 1918, and is likely responsible for erection of this crossing. Since its completion, the bridge has served to carry vehicular traffic in this rural Pierce County location.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C007012430; Pierce County Commissioners' Record, Books 3 - 5, covering the period 1899 to 1919; field inspection by Fred Quivik, 26 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge PIER12
NDOR: C007012615

DATE(S) OF CONSTRUCTION
ca.1913

LOCATION
county road over unnamed stream; S1/36, T26/27N, R2W
4.0 miles north-northeast of Pierce; Pierce County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 42)

CONDITION
good

OWNER
Pierce County

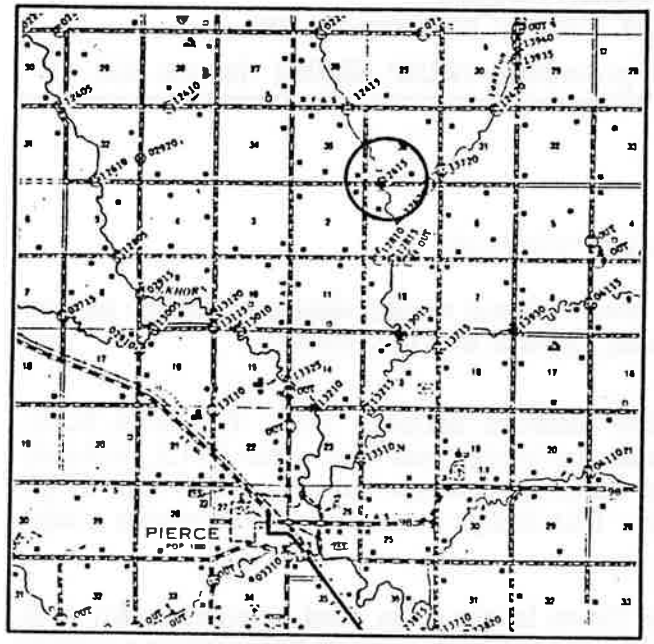
span number:	1	superstructure:	steel, rigid-connected lattice pony truss
span length:	30.0'	substructure:	steel H-pile abutments with concrete back- and wingwalls
total length:	32.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.6'	other features:	end post: 2 angles; upper chord: 2 angles; lower chord: angle; diagonal: lattice nd pair of angles; struts: angle; floor beam: I-beam; lateral bracing: rods

This small-scale truss carries a gravel-surfaced road over an intermittent stream on the line between Sections 1/36, T26/27N, R2W, northeast of Pierce. Configured as a rigid-connected lattice pony truss with latticed guardrails, the bridge was built circa 1913, probably by the Canton Bridge Company of Canton, Ohio, which held Pierce County's annual bridge building contract between 1905 and 1918. It is identical to another lattice pony truss in Pierce County (PIER19), documentable to 1913. This bridge is unaltered and retains a high degree of physical integrity.

With its lattice configuration, this diminutive structure represents a throwback of sorts to the Town lattice truss used extensively for 19th covered timber bridges. The multiple diagonals of a lattice truss function both in tension and compression at various times while a vehicle crosses over the bridge, making the truss structurally indeterminate, and for this reason it was seldom used in all-metal configurations beyond short-span applications. All-steel lattice trusses were uncommon even for their period, though they were sometimes carried as standard items in bridge builders' catalogs. No doubt several were built on Nebraska's secondary roads in the early 1900s. Through attrition, however, only two are known to remain today: this bridge and another Pierce County structure, the Willow Creek Bridge (PIER19). Both are attributable to the Canton Bridge Company. Although its construction history remains only partially documented, this bridge is technologically significant as one of the last remaining examples in the state of this early vehicular truss type.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C007012615; Pierce County Commissioners' Record, Books 3 - 5, covering the period 1899 to 1919; field inspection by Fred Quivik, 26 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge PIER13
NDOR: C007012720

DATE(S) OF CONSTRUCTION
1914

LOCATION
county road over North Fork of the Elkhorn River; S30/31, T28N, R2W
0.5 mile east of Osmond; Pierce County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 33)

CONDITION
good

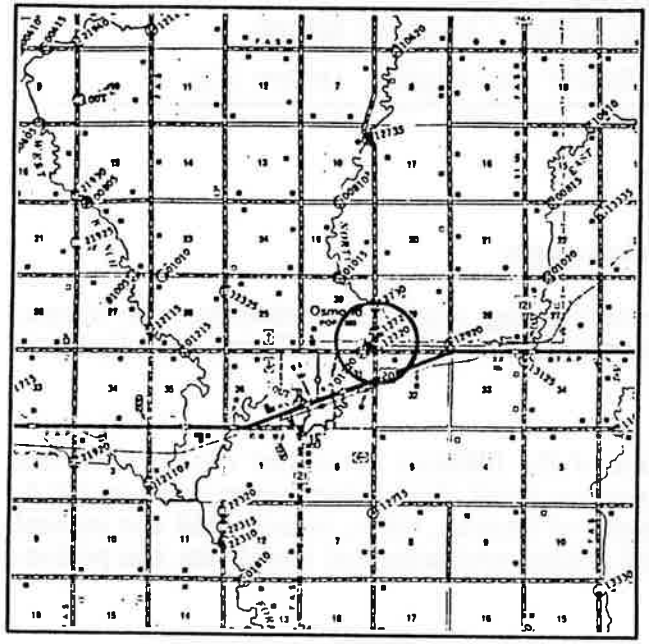
OWNER
Pierce County

span number:	1	superstructure:	steel stringer
span length:	22.0'	substructure:	concrete-encased sills on I-beam pile bent abutments
total length:	24.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	16.0'	other features:	stringer: 6 I-beam with outer channels; lateral bracing: angles clipped to bottom flange; guardrail: lattice; commemorative plate: **George Holmes, Chairman, Christian Boll, Jacob Pilger, J.B. McDonald, County Clerk**

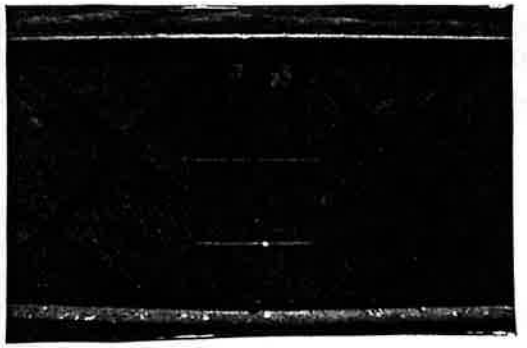
This small-scale bridge carries a gravel-surfaced road over the East Branch of the North Fork of the Elkhorn River just east of Osmond in north-central Pierce County. As indicated by the commemorative plate mounted on the structure itself, the bridge was erected in 1914. A simply-configured steel stringer span, the bridge was erected by the Canton Bridge Company of Canton, Ohio, which held the annual bridge contracts for Pierce County between 1905 and 1918. Essentially unaltered, it fits well within technological trends for the period.

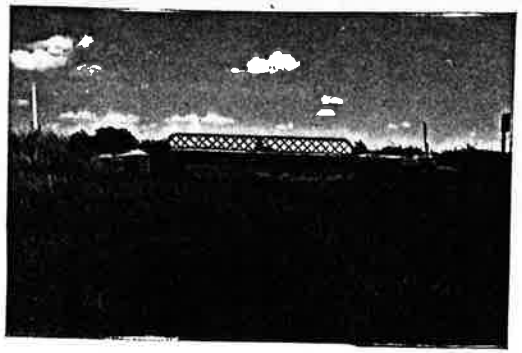
NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C007012720; Pierce County Commissioners' Journal, located at the Pierce County Courthouse, Pierce, Nebraska, (1914 was the only year George Holmes was chairman of the Commission); field inspection by Fred Quivik, July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Elkhorn River Bridge PIER14
NDOR: C007012735

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over North Fork of the Elkhorn River; NE1/4, S18, T28N, R2W
3.0 miles north of Osmond; Pierce County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 29)

CONDITION
good

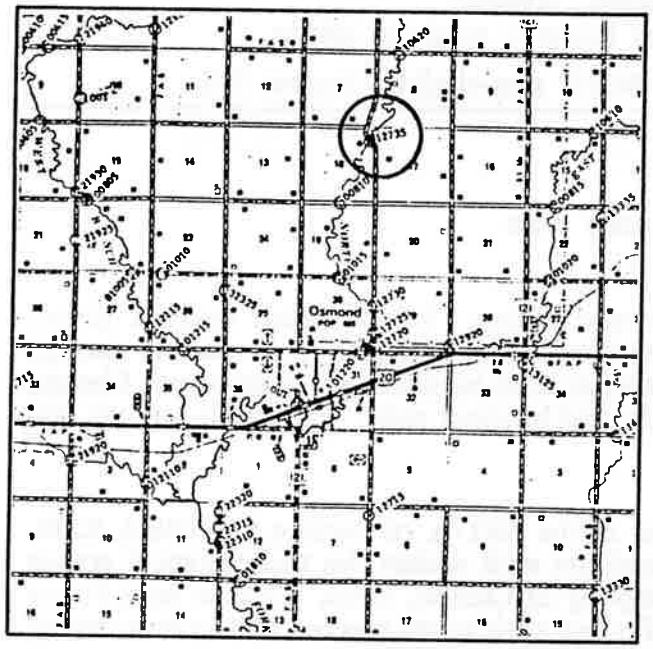
OWNER
Pierce County

span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt half-hip pony truss
span length:	50.0'	substructure:	concrete abutments
total length:	51.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.5'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: eyerods (outer panels), looped eyebars (center panel); vertical: 2 pair angles with double lacing; diagonal: looped eyebars; counter: looped eyebar with turnbuckle; floor beam: I-beam, field bolted to vertical below lower chord; lateral bracing: rods; guardrail: lattice; hip block builder's plate: **Canton Bridge Co.**

This small-scale truss carries a gravel-surfaced road over the North Fork of the Elkhorn River in the NE1/4, of Section 18, T28N, R2W. Configured as a pin-connected Pratt half-hip pony truss, the bridge was built circa 1910, and fits well within the technological trends of the period. A bridge plate reveals that the structure was built by the Canton Bridge Company of Canton, Ohio. Canton held Pierce County's annual bridge building contract between 1905 and 1918, and this bridge was one of many such spans erected by the firm during this period. Since its completion, the bridge has served to carry vehicular traffic in this rural Pierce County location.

NAME(S) OF STRUCTURE
Elkhorn River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C007012735; Pierce County Commissioners' Record, Books 3 - 5, covering the period 1899 to 1919; field inspection by Fred Quivik, 26 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge PIER15
NDOR: C007012825

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over unnamed stream; S3/10, T26N, R1W
6.5 miles northeast of Pierce; Pierce County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 29)

CONDITION
good

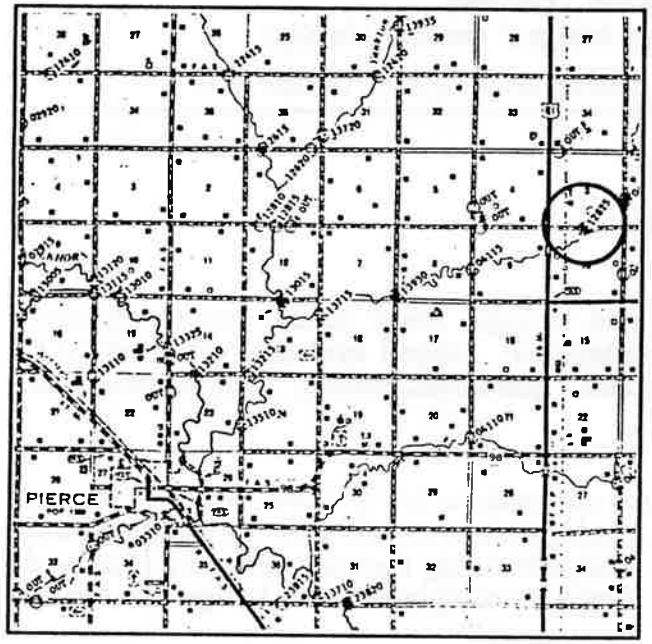
OWNER
Pierce County

span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt pony truss
span length:	55.0'	substructure:	concrete deck
total length:	56.0'	floor/decking:	concrete over I-beam stringers
roadway wdt.:	15.5'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: looped eyebars; vertical: 2 pair angles with double lacing; diagonal: looped eyebars; floor beam: I-beam; lateral bracing: rod with threaded ends; guardrail: lattice; endpost-mounted builder's plate: **Canton Bridge Co.**

This small-scale truss carries a gravel-surfaced road over an unnamed stream on the line between Sections 3/10, T26N, R1W, northeast of Pierce. Configured as a pin-connected Pratt pony truss, the bridge was built circa 1910. A bridge plate reveals that the structure was built by the Canton Bridge Company of Canton, Ohio. Canton held Pierce County's annual bridge building contract between 1905 and 1918, and this bridge was one of many such spans erected by the firm during this period. Since its completion, the bridge has served to carry vehicular traffic in this rural Pierce County location.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C007012825; Pierce County Commissioners' Record, Books 3 - 5, covering the period 1899 to 1919; field inspection by Fred Quivik, 26 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Yankton Slough Bridge PIER16
NDOR: C007013015

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over Yankton Slough; S12/13, T26N, R2W
2.0 miles northeast of Pierce; Pierce County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 30)

CONDITION
good

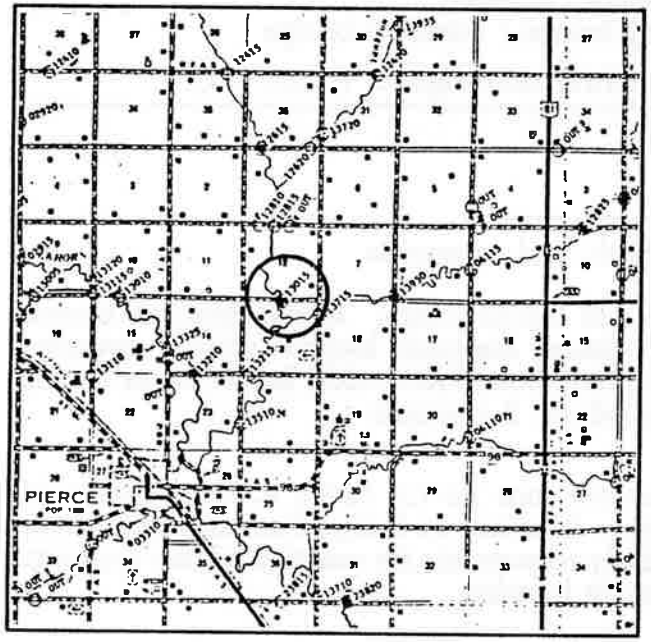
OWNER
Pierce County

span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt half-hip pony truss
span length:	60.0'	substructure:	steel H-pile bent abutments with concrete back- and wingwalls
total length:	61.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.8'	other features:	upper chord: 2 channels with cover plate and batten plates; lower chord: 2 looped eyebars; vertical: 2 pair angles with batten plates; diagonal: looped eyebars; counter: eyerod with turnbuckle; floor beam: I-beam, field bolted to vertical below lower chord; lateral bracing: rod with threaded ends; guardrail: 2 channels

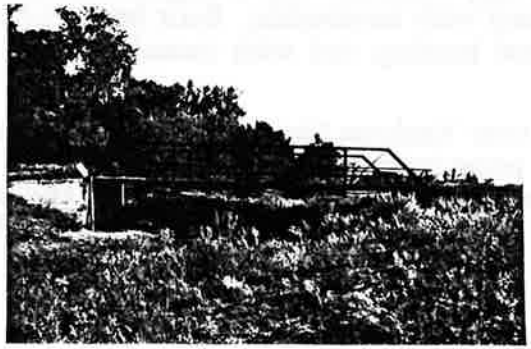
This small-scale truss carries a gravel-surfaced road over Yankton Slough on the line between Sections 12/13, T26N, R2W, northeast of Pierce. Configured as a pin-connected Pratt half-hip pony truss, the bridge was built circa 1910. The Canton Bridge Company of Canton, Ohio, held Pierce County's annual bridge building contract between 1905 and 1918, and is likely responsible for erection of this crossing. Since its completion, the bridge has served to carry vehicular traffic in this rural Pierce County location.

NAME(S) OF STRUCTURE
Yankton Slough Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C007013015; Pierce County Commissioners' Record, Books 3 - 5, covering the period 1899 to 1919; field inspection by Fred Quivik, 26 July 1989.

INVENTORIED BY	AFFILIATION	DATE
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Elkhorn River Bridge PIER17
NDOR: C007013210

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over North Fork of the Elkhorn River; S14/23, T26N, R2W
1.0 mile north of Pierce; Pierce County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 32)

CONDITION
good

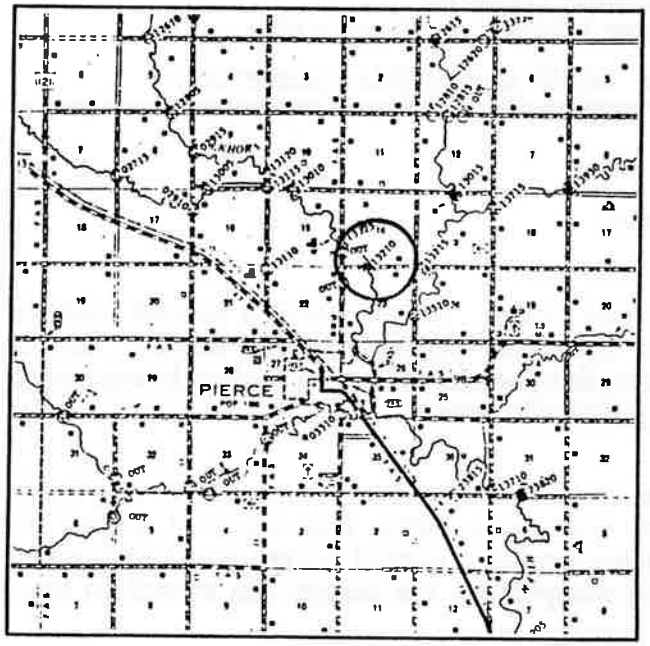
OWNER
Pierce County

span number:	1	superstructure:	steel, 5-panel, pin-connected Pratt pony truss
span length:	80.0'	substructure:	concrete abutments; H-pile bent pier
total length:	98.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.4'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 looped eyebars; vertical: 2 pair angles with double lacing; diagonal: looped eyebars; counter: looped eyebar with turnbuckle; floor beam: I-beam, field bolted to vertical below lower chord; lateral bracing: rod with threaded ends; guardrail: lattice

This small-scale truss carries a gravel-surfaced road over the North Fork of Elkhorn River on the line between Sections 14/23, T26N, R2W, north of Pierce. Configured as a pin-connected Pratt pony truss, the bridge was built circa 1910, and fits well within the technological trends of the period. The Canton Bridge Company of Canton, Ohio, held Pierce County's annual bridge building contract between 1905 and 1918, and is likely responsible for erection of this crossing. Since its completion, the bridge has served to carry vehicular traffic in this rural Pierce County location.

NAME(S) OF STRUCTURE
Elkhorn River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C007013210; Pierce County Commissioners' Record, Books 3 - 5, covering the period 1899 to 1919; field inspection by Fred Quivik, 26 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Willow Creek Bridge
NDOR: C007013605

PIER18

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
county road over Willow Creek; S25/36, T26N, R4W
10.0 miles west of Pierce; Pierce County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 27)

CONDITION
good

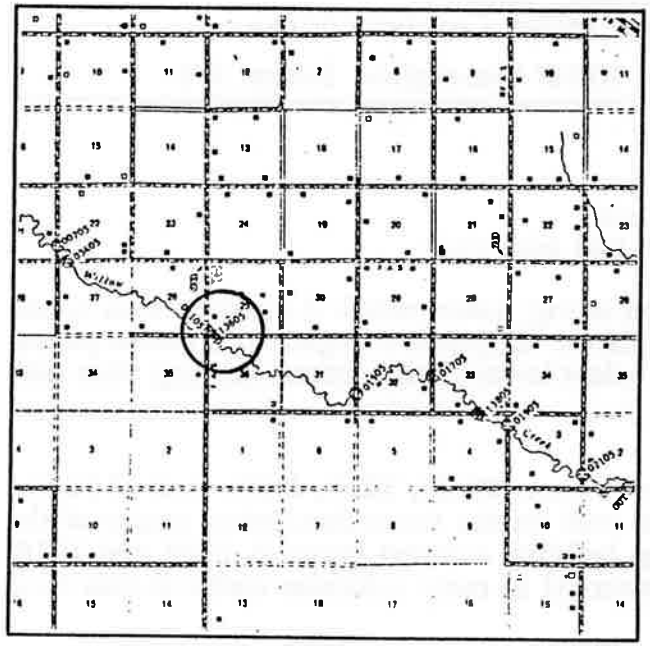
OWNER
Pierce County

span number:	1	superstructure:	steel, 3-panel, rigid-connected Pratt pony truss
span length:	50.0'	substructure:	steel H-pile abutments with concrete back- and wingwalls
total length:	52.0'	floor/decking:	concrete deck over I-beam stringers
roadway wdt.:	15.5'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 channels with batten plates; vertical: 2 pair angles with batten plates; diagonal: 2 angles with batten plates; floor beam: I-beam, field bolted to vertical below lower chord; lateral bracing: rods with threaded ends; guardrail: lattice

This small-scale truss carries a gravel-surfaced road over Willow Creek on the line between Sections 25/36, T26N, R4W, west of Pierce. Configured as a rigid-connected Pratt pony truss, the bridge was built circa 1915, and fits well within the technological trends of the period. The Canton Bridge Company of Canton, Ohio, held Pierce County's annual bridge building contract between 1905 and 1918, and is likely responsible for erection of this crossing. Since its completion, the bridge has served to carry vehicular traffic in this rural Pierce County location.

NAME(S) OF STRUCTURE
Willow Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C007013605; Pierce County Commissioners' Record, Books 3 - 5, covering the period 1899 to 1919; field inspection by Fred Quivik, 26 July 1989.

INVENTORIED BY	AFFILIATION	DATE
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Willow Creek Bridge
NDOR: C007013805

PIER19

DATE(S) OF CONSTRUCTION
1913

LOCATION
county road over Willow Creek; S4/33, T25/26N, R3W
6.5 miles south of Foster; Pierce County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 48)

CONDITION
good

OWNER
Pierce County

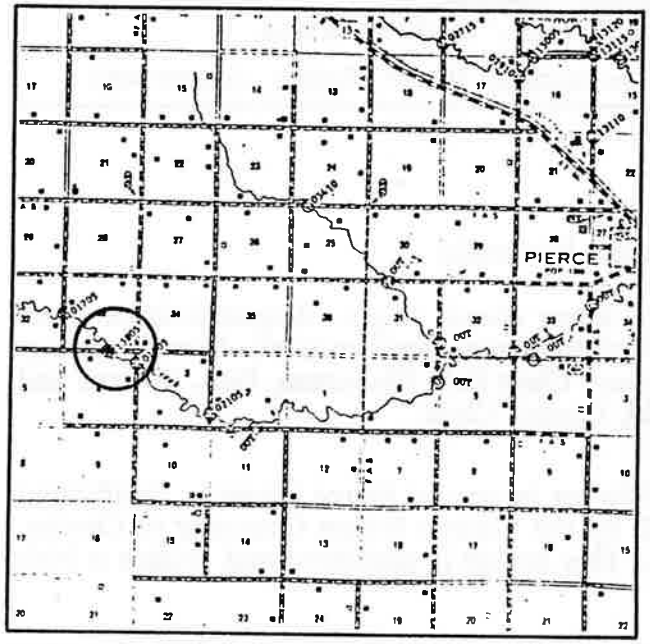
span number:	1	superstructure:	steel, rigid-connected lattice pony truss
span length:	34.0'	substructure:	steel I-beam pile bent abutments with concrete backwalls
total length:	36.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.7'	other features:	end post: 2 angles; upper chord: 2 angles; lower chord: angle; diagonal: lattice bars with rosettes; floor beam: I-beam, field bolted to center panel vertical; lateral bracing: rod with threaded ends; commemorative plate: **Chris Boll, Chairman, Geo. Holmes and Jacob Pilger, Commissioners, J.B. McDonald, County Clerk**

This small-scale truss carries a gravel-surfaced road over Willow Creek 6-1/2 miles south of Foster in central Pierce County. Configured as a rigid-connected lattice pony truss with latticed guardrails, the bridge was built in 1913 by the Canton Bridge Company of Canton, Ohio, which held Pierce County's annual bridge building contract between 1905 and 1918. This bridge is unaltered and retains a high degree of physical integrity.

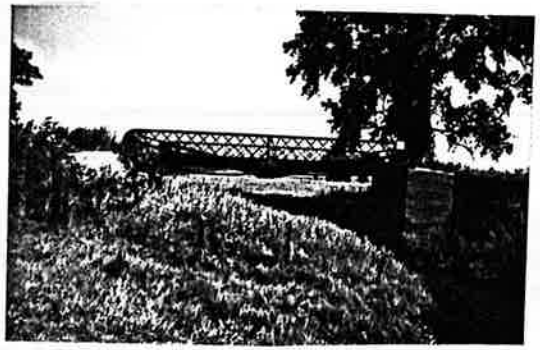
With its lattice configuration, this diminutive structure represents a throwback of sorts to the Town lattice truss used extensively for 19th covered timber bridges. The multiple diagonals of a lattice truss function both in tension and compression at various times while a vehicle crosses over the bridge, making the truss structurally indeterminate, and for this reason it was seldom used in all-metal configurations beyond short-span applications. All-steel lattice trusses were uncommon even for their period, though they were sometimes carried as standard items in bridge builders' catalogs. No doubt several were built on Nebraska's secondary roads in the early 1900s. Through attrition, however, only two are known to remain today: this bridge and another Pierce County structure, the Willow Creek Bridge (PIER12). Both are attributable to the Canton Bridge Company. In a well-preserved state, this bridge is technologically significant as one of the last remaining examples in the state of this early vehicular truss type.

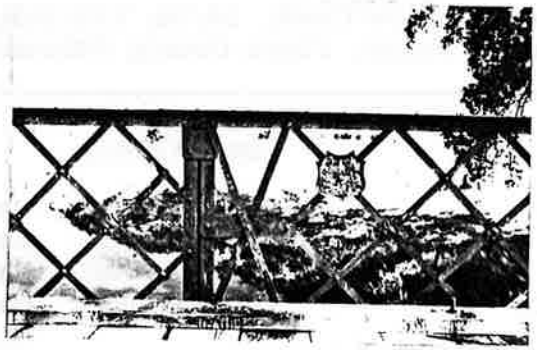
NAME(S) OF STRUCTURE
Willow Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C007013805; Pierce County Commissioners' Record, located at the Pierce County Courthouse, Pierce, Nebraska; field inspection by Fred Quivik, 26 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
North Fork of Elkhorn River Bridge PIER20
NDOR: C007013920

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over North Fork Elkhorn River; S17/18, T25N, R1W
2.5 miles north of Hadar; Pierce County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 34)

CONDITION
good

OWNER
Pierce County

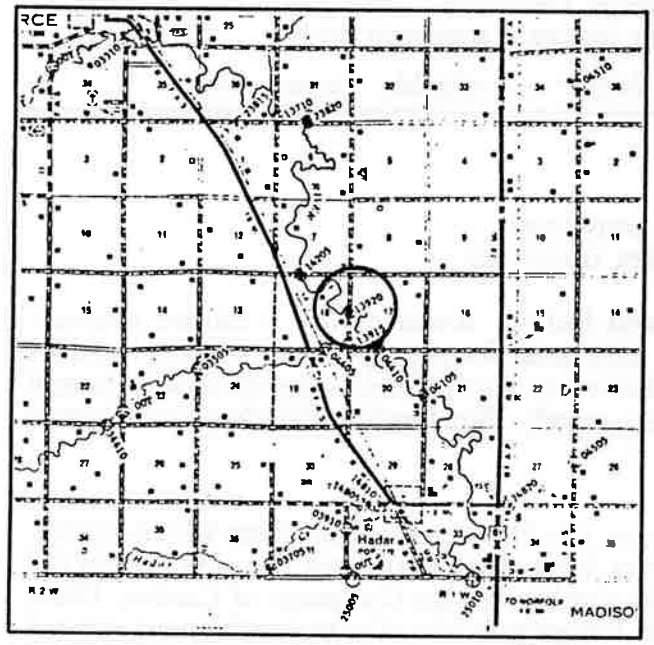
span number:	2	superstructure:	steel, 4-panel, pin-connected Pratt half-hip pony truss
span length:	60.0'	substructure:	concrete-filled steel cylinder piers with timber backwalls
total length:	121.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	15.5'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 looped eyebars; vertical: 2 pair angles with double lacing; diagonal: looped eyebars; counter: eyerod with turnbuckle; floor beam: I-beam, field bolted to vertical below lower chord; lateral bracing: rod with threaded ends; guardrail: wood; hip block builder's plate: Canton Bridge Co.

This two-span truss carries a gravel-surfaced road over the North Fork of the Elkhorn River on the line between Sections 17/18, T25N, R1W, north of Hadar. Configured as a pin-connected Pratt half-hip pony truss, the bridge was built circa 1910, and fits well within the technological trends of the period. A bridge plate reveals that the structure was built by the Canton Bridge Company of Canton, Ohio. Canton held Pierce County's annual bridge building contract between 1905 and 1918, and this bridge was one of many such spans erected by the firm during this period. Since its completion, the bridge has served to carry vehicular traffic in this rural Pierce County location.

NAME(S) OF STRUCTURE

North Fork of Elkhorn River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C007013920; Pierce County Commissioners' Record, Books 3 - 5, covering the period 1899 to 1919; field inspection by Fred Quivik, 27 July 1989.

INVENTORIED BY

Lon Johnson, Renewable Technologies, Inc.

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge PIER21
NDOR: C007013930

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over unnamed stream; S7/8, T26N, R1W
4.0 miles northeast of Pierce; Pierce County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 29)

CONDITION
good

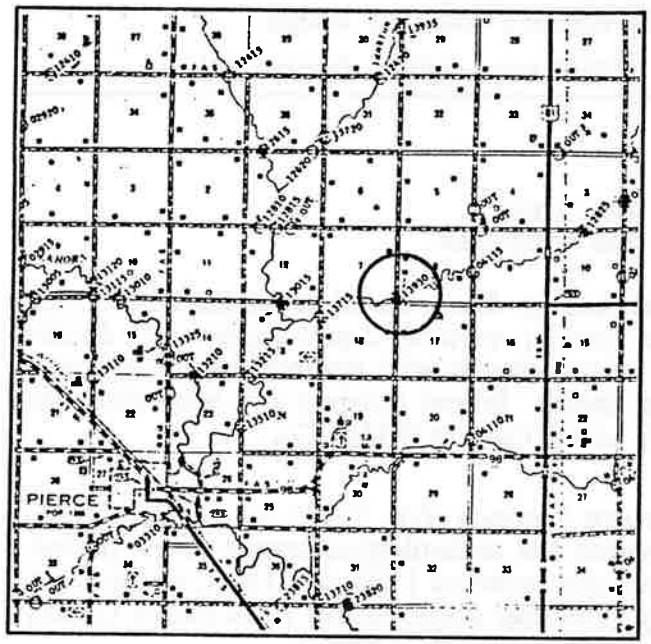
OWNER
Pierce County

span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt half-hip pony truss
span length:	50.0'	substructure:	steel H-pile abutments with concrete back- and wingwalls
total length:	52.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.4'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 angles with batten plates (outer panels), looped eyebars (center panel); vertical: 2 pair angles with double lacing; diagonal: looped eyebars; counter: looped eyebar with turnbuckle; floor beam: I-beam, field bolted to vertical below lower chord; lateral bracing: rod with threaded ends; guardrail: lattice; hip block builder's plate: **Canton Bridge Co.**

This small-scale truss carries a gravel-surfaced road over an unnamed stream on the line between Sections 7/8, T26N, R1W. Configured as a pin-connected Pratt half-hip pony truss, the bridge was built circa 1910, and fits well within the technological trends of the period. The Canton Bridge Company of Canton, Ohio, held Pierce County's annual bridge building contract between 1905 and 1918, and is likely responsible for erection of this crossing. Since its completion, the bridge has served to carry vehicular traffic in this rural Pierce County location.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C007013930; Pierce County Commissioners' Record, Books 3 - 5, covering the period 1899 to 1919; builder's plate on bridge; field inspection by Fred Quivik, 26 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Elkhorn River Bridge PIER22
NDOR: C007014205

DATE(S) OF CONSTRUCTION
1914

LOCATION
county road over North Fork of the Elkhorn River; S7/18, T25N, R1W
3.5 miles southeast of Pierce; Pierce County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING determined NRHP eligible (score: 38)

CONDITION
good

OWNER
Pierce County

span number: 1
span length: 120.0'
total length: 151.0'
roadway wdt.: 15.6'

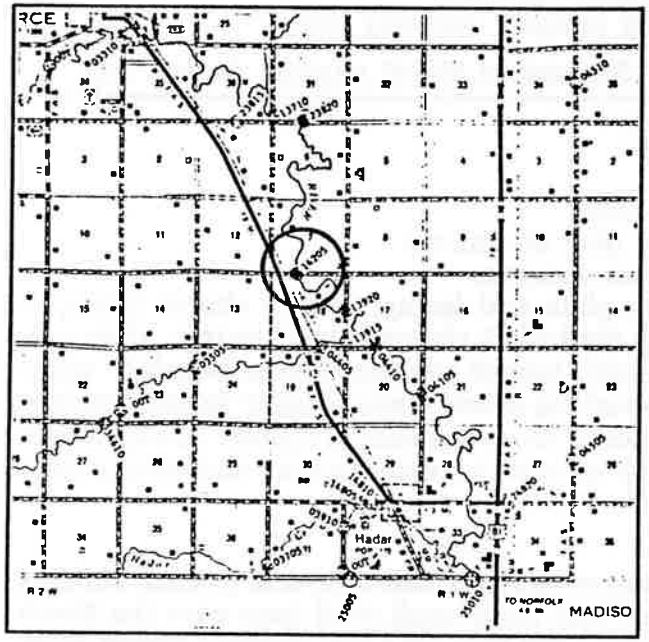
superstructure: steel, 7-panel, pin-connected Pratt through truss
substructure: concrete-filled steel cylinder piers; steel pile bent abutments
floor/decking: gravel over corrugated steel deck with I-beam stringers
other features: upper chord: 2 channel sections with cover plate and lacing; lower chord: 2 looped eyebars; hip vertical: 2 angles with lacing; vertical: 2 channels with lacing; diagonal: 2 looped eyebars; counter: rods (outer panels), looped eyebars (center panels); strut: 2 angles; floor beam: I-beam, field bolted to vertical below lower chords; lateral bracing: rod with threaded ends; guardrail: lattice; portal-mounted builder's plate: **1914, Canton Bridge Co., Builders, Canton, Ohio** (west); list of county commissioners and county clerk (east)

Until 1905 Pierce County apparently limited its bridge construction to modest timber pile spans, awarding small contracts to local builders for these structures. In October 1905 the Pierce County Commissioners solicited competitive bids for a small steel span over the North Fork of the Elkhorn River, about six miles northwest of the county seat of Pierce. This marked the first time the county's bridge work attracted large bridge contractors. The Canton Bridge Company of Canton, Ohio, was the successful bidder, beginning a period of 13 years during which Pierce County awarded virtually all of its bridge construction contracts to the giant midwestern bridge firm. After that first contract, the commissioners awarded a series of annual contracts to Canton on the basis of unit prices for various bridge types and individual components. Canton received Pierce County's annual bridge contracts each year through 1918, despite bidding against several other firms prominent in the state and the region. In 1914 Canton erected this medium-span through truss over the Elkhorn River from steel rolled by the Cambria mills of Pittsburgh, as part of that year's annual contract. The structure consists of a single seven-panel, pinned Pratt through truss, supported by concrete-filled steel cylinder piers. Since its completion in 1914, the Elkhorn River Bridge has carried vehicular traffic in essentially unaltered condition.

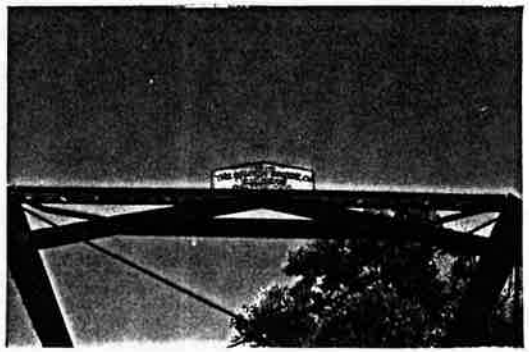
Approximately 60 pinned Pratt through trusses have been identified in Nebraska by the statewide historic bridge inventory. These range in span length from 80 feet to 160 feet (with the average being about 110 feet) and in construction date from 1887 to 1935 (with all but a few being erected in the 1910s). A 120-foot span built in 1914, the Elkhorn River Bridge falls squarely within the mainstream of the early bridge construction milieu in Nebraska. It is the longest bridge in Pierce County and the only through truss, and it represents the body of work executed in the county by this prominent bridge erector.

NAME(S) OF STRUCTURE
Elkhorn River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C0070114205; Pierce County Commissioners' Record, Books 3 - 5, covering the period 1899 to 1919; builder's plate on bridge; field inspection by Fred Quivik, 27 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Elkhorn River Bridge PIER23
NDOR: C007022310

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over North Fork of the Elkhorn River; S11/12, T27N, R3W
2.0 miles south-southwest of Osmond; Pierce County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 32)

CONDITION
good

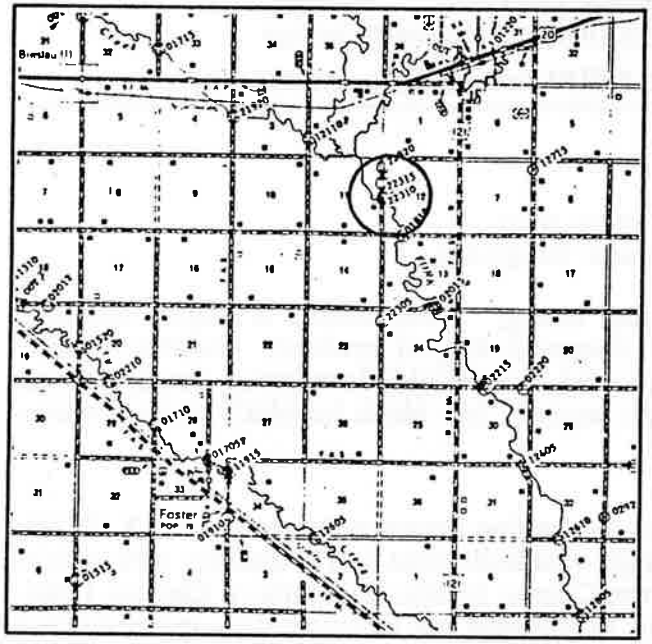
OWNER
Pierce County

span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt half-hip pony truss
span length:	60.0'	substructure:	steel H-pile abutments with concrete back- and wingwalls
total length:	61.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.5'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 looped eyebars; vertical: 2 pair angles with double lacing; diagonal: looped eyebars; counter: eyerod with turnbuckle; floor beam: I-beam, field bolted to vertical below lower chord; lateral bracing: rod with threaded ends; guardrail: lattice; hip block builder's plate: **Canton Bridge Co.**

This small-scale truss carries a gravel-surfaced road over the North Fork of the Elkhorn River on the line between Sections 11/12, T27N, R3W, southwest of Osmond. Configured as a pin-connected Pratt half-hip pony truss, the bridge was built circa 1910, and fits well within the technological trends of the period. A bridge plate reveals that the structure was built by the Canton Bridge Company of Canton, Ohio. Canton held Pierce County's annual bridge building contract between 1905 and 1918, and this bridge was one of many such spans erected by the firm during this period. Since its completion, the bridge has served to carry vehicular traffic in this rural Pierce County location.

NAME(S) OF STRUCTURE
Elkhorn River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C007022310; Pierce County Commissioners' Record, Books 3 - 5, covering the period 1899 to 1919; builder's plate on bridge; field inspection by Fred Quivik, 26 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Elkhorn River Bridge PIER24
NDOR: C007023820

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over North Fork of the Elkhorn River; S6/31, T25/26N, R1W
2.5 miles southeast of Pierce; Pierce County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 32)

CONDITION
good

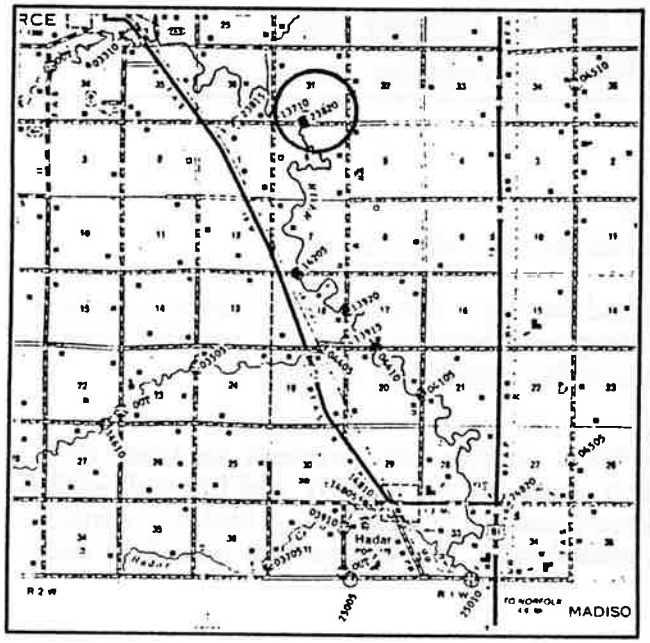
OWNER
Pierce County

span number:	1	superstructure:	steel, 5-panel, pin-connected Pratt pony truss
span length:	80.0'	substructure:	concrete-filled steel cylinder piers with concrete back- and sidewalls
total length:	82.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	15.5'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: looped eyebars; vertical: 2 pair angles with double lacing; diagonal: looped eyebars; counter: looped eyebars; floor beam: I-beam; lateral bracing: rods; guardrail: lattice

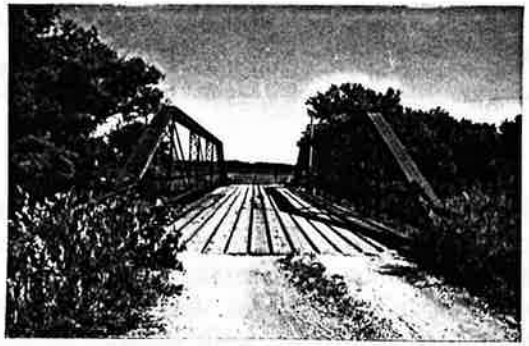
This small-scale truss carries a gravel-surfaced road over the North Fork of the Elkhorn River on the line between Sections 6/31, T25/26N, R1W, southeast of Pierce. Configured as a pin-connected Pratt pony truss, the bridge was built circa 1910, and fits well within the technological trends of the period. The Canton Bridge Company of Canton, Ohio, held Pierce County's annual bridge building contract between 1905 and 1918, and is likely responsible for erection of this crossing. Since its completion, the bridge has served to carry vehicular traffic in this rural Pierce County location.

NAME(S) OF STRUCTURE
Elkhorn River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C007023820; Pierce County Commissioners' Record, Books 3 - 5, covering the period 1899 to 1919; field inspection by Fred Quivik, 27 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Shell Creek Bridge
NDOR: C007113030

PLAT01

DATE(S) OF CONSTRUCTION
1939

LOCATION
county highway over Shell Creek; S10/15, T18N, R2W
1.9 miles west of Platte Center; Platte County, Nebraska

USE (ORIGINAL / CURRENT)
highway bridge / highway bridge

RATING NRHP non-eligible (score: 25)

CONDITION
excellent

OWNER
Platte County

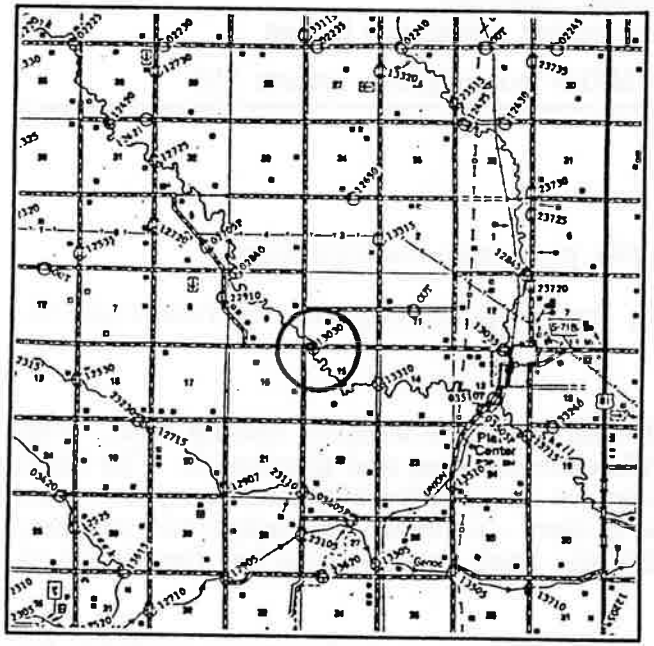
span number:	3	superstructure:	concrete slab
span length:	40.0'	substructure:	concrete abutments and wingwalls; timber pile piers with concrete caps
total length:	100.0'	floor/decking:	asphalt over concrete deck
roadway wdt.:	24.0'	other features:	concrete curbing with steel angle guardrail; bridge plate: **Capacity 15 Tons FAS27A-(1)1 1938**

Located almost two miles west of Platte Center in central Platte County, the Shell Creek Bridge carries a paved county road. The structure is comprised of three concrete slab spans, supported by timber pile bent piers with concrete caps and abutments. The Shell Creek Bridge was designed in 1938 by the Nebraska Bureau of Roads and Bridges and was let for competitive bids late that year under Project No. FAS 27A-(1)1. On December 31st, the bureau contracted for construction of the project - involving this bridge and another, culverts, grading and installation of signage - for $29,657.77. Since its completion in 1939, the Shell Creek Bridge has functioned in place, with no alterations of note.

"It is quite apparent that two dominant types are emerging as the most popular of all the various common bridge types available for selection," the bureau reported in 1940. "These two are the concrete slab bridge and the steel deck girder bridge. It is noted that the percentage of the concrete slab occurrence is still rising and that the deck-steel-girder suffers a slight decline." The bureau built more than 80 concrete slabs during the 1939-40 biennium, most with spans between 18 and 38 feet in length. With its 40-foot span length, the Shell Creek Bridge is one of longer structures of the more than 300 concrete slabs erected by the bureau of roads in the 1930s. This bridge is otherwise unremarkable: a typically configured example of a common highway bridge type.

NAME(S) OF STRUCTURE
Shell Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C007113030; Nebraska Department of Roads and Irrigation, **Twenty-Third Biennial Report**, 1939-40, pp. 59-60, 127; field inspection by Clayton Fraser 16 November 1989

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Columbus Genoa Canal Bridge
NDOR: C007113710

PLAT02

DATE(S) OF CONSTRUCTION
1936

LOCATION
county road over Columbus Genoa Canal; S36, T18N, R2W
2.5 miles south of Platte Center; Platte County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 26)

CONDITION
good

OWNER
Platte County

span number:	2	superstructure:	parabolic concrete slab
span length:	54.0'	substructure:	concrete abutments, wingwalls and pier
total length:	112.0'	floor/decking:	asphalt over concrete deck
roadway wdt.:	24.0'	other features:	concrete guardrail with decoratively recessed panels; bridge plate: **CAPACITY - 15 TONS ERECTED 1936**

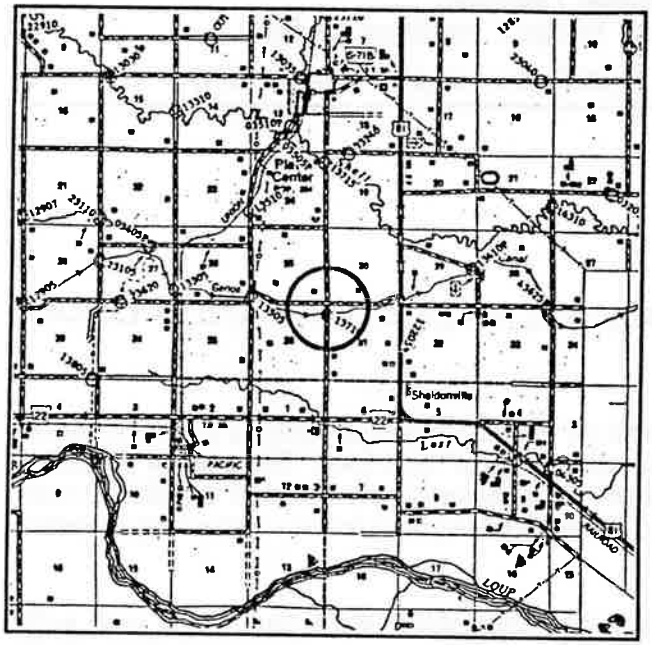
This bridge carries an unpaved county road across the Columbus Genoa Canal 2.5 miles south of Platte Center in central Platte County. Comprised of two parabolic concrete slabs, the bridge has a long span of 54 feet and an overall length of 112 feet. Support is provided by concrete piers and abutments with wingwalls. The bridge also features a concrete guardrail with decoratively molded panels. It was constructed in 1936, probably by the irrigation district that built the Columbus Genoa Canal. Today, this lightly-traveled crossing appears much the same as when originally built.

The Columbus Genoa Canal Bridge may prove to be eligible for the National Register for its association with the canal and with reclamation in central Nebraska. But within the context of vehicular bridges, it is an example of a common structural type, built extensively throughout the state in the 1930s.

NAME(S) OF STRUCTURE

Columbus Genoa Canal Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C007113710; Paul L. Harley, "Irrigation Development in Nebraska," **Nebraska Blue Print** March 1947 (Part I), pp. 133-35, April 1947 (Part II), pp. 160-62, 168; field inspection by Clayton Fraser 16 November 1989.

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Looking Glass Creek Bridge
NDOR: C007123205

PLAT03

DATE(S) OF CONSTRUCTION
ca.1905

LOCATION
county road over Looking Glass Creek; S18/19, T18N, R3W
6.6 miles northwest of Monroe; Platte County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 35)

CONDITION
fair

OWNER
Platte County

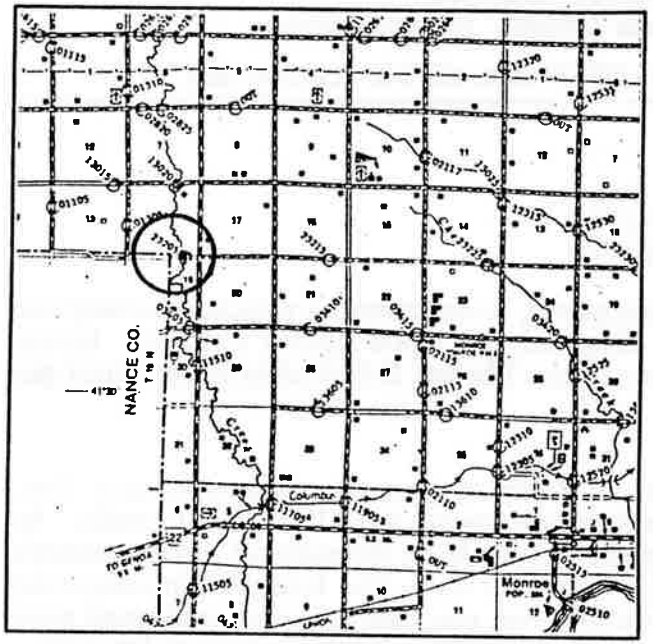
span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt half-hip pony truss
span length:	60.0'	substructure:	steel pile bent abutments with timber wingwalls
total length:	60.0'	floor/decking:	timber over steel stringers
roadway wdt.:	15.9'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 punched rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 looped square eyebars; lateral bracing: round bar with threaded ends; floor beam: I-beam, U-bolted to lower chord pin at vertical ; guardrail: 2 channels

This bridge carries a gravel-surfaced county road across Looking Glass Creek northwest of Monroe, near the Nance County line. Consisting of a single pinned Pratt half-hip pony truss superstructure, it rests on steel pile bent abutments with timber wingwalls. As indicated by a builder's plate, the truss was erected by the Standard Bridge Company of Omaha, which built virtually all of the county's small-scale steel bridges between 1900 and 1911. County records, however, do not reveal a definitive date. The bridge's pin-connected detailing and dimensions suggest an erection date of around 1905, a period in which Platte County was contracting for several small steel truss and stringer structures. The Looking Glass Creek Bridge appears unaltered and has retained a high degree of physical integrity.

A subtype of the venerable Pratt pony truss, the Pratt half-hip configuration was marketed extensively by Midwestern bridge companies in the early 1900s. Its primary advantage as a structural type was that, by eliminating the vertical members at the hip connections, it was more materially conservant than the standard Pratt. Its disadvantage was that it was generally limited to short-span applications, typically 30-60 feet. But Nebraska's myriad small streams lent themselves to exactly this range. As a result, thousands of pinned half-hip pony trusses were erected across the state between 1900 and 1915, and many remain today. The Looking Glass Creek Bridge is a typical example of this relatively common structural type.

NAME(S) OF STRUCTURE
Looking Glass Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C007123205; Platte County Commissioners' Record, Book 5: 5 March 1902 (page 492); Book 7, 9 April 1907 (page 1), 10 March 1908 (page 184); Book 8, 1 March 1909 (page 1), 15 March 1910 (page 157), 1 March 1911, (page 345); field inspection by Clayton Fraser and Sheila Bricher-Wade, 16 November 1989.

INVENTORIED BY
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Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Columbus Loup River Bridge
NDOR: S030 37773L

PLAT04

DATE(S) OF CONSTRUCTION
1932-1933

LOCATION
U.S. Highway 30 over the Loup River; S30, T17N, R1E
south edge of Columbus; Platte County, Nebraska

USE (ORIGINAL / CURRENT)
highway bridge / highway bridge

RATING NRHP eligible (score: 68)

CONDITION
excellent

OWNER
Nebraska Department of Roads

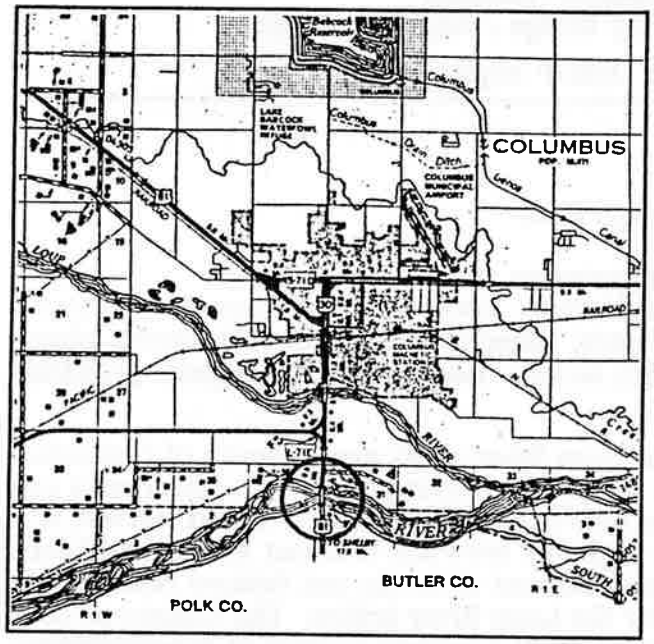
span number:	7	superstructure:	steel, 8-panel, rigid-connected Parker through truss
span length:	160.0'	substructure:	concrete abutments, wingwalls and piers
total length:	1270.0'	floor/decking:	asphalt covered concrete deck over I-beam stringers
roadway wdt.:	24.0'	other features:	upper chord: 2 channels with cover plates and lacing: lower chord: 2 channels with batten plates; vertical: 2 channels with batten plates; diagonal: 2 angles with batten plates, two angles with lacing; strut: 2 angles with lacing; lateral bracing: angles; guardrail: steel with concrete curbing

A bridge was built on this site in 1888 by the King Iron Bridge Company. Located over the Loup River at its mouth south of Columbus, the structure featured one of Nebraska's most visually striking assemblage of spans, with its four 250-foot pinned through trusses and lengthy trussed approaches. This bridge, as well as another multiple-span truss over the Platte River immediately south, served as a regionally important vehicular crossing. It proved strategic in the routing of the Lincoln Highway between Fremont and Grand Island in the 1910s. By the late 1920s, however, both bridges had become liabilities. The Nebraska Bureau of Roads and Bridges replaced the Platte River bridge in 1930-31, and late in 1931 bureau engineers designed a replacement for the Loup River bridge. The Columbus Loup River Bridge consisted of seven riveted Parker through trusses and was immense, consuming nearly 2 million pounds of superstructural steel, some 15,000 feet of steel piling and almost 2000 cubic yards of concrete. Early in 1932 the bureau awarded a construction contract for the new bridge to the Omaha Steel Company. The existing bridge was dismantled and two of the spans (**SHER01** and **SHER02**) later moved to Sheridan County and re-erected. Meanwhile, Omaha Steel devoted over a year to fabricating and building the new bridge, completing it in mid-1933 for an overall cost of $451,023.76, including approach grading. The structure has since carried vehicular traffic along heavily traveled U.S. Highway 30. With only minimal maintenance-related changes, the Columbus Bridge retains a high degree of physical integrity.

The state bureau of roads ordinarily eschewed truss construction in favor of steel stringers and deck girders for its multiple-span structures over the Platte and Loup rivers. "As might be expected the steel-truss type of bridge is being used sparingly," the bureau reported in 1938, "due to the better adaptation of deck [girder] construction to the Nebraska terrain and stratigraphy." With an overall length of 1270 feet, the Columbus Loup River Bridge was one of the longest trussed crossings developed by the state. It is today the longest vehicular truss bridge in the state, aside from the Missouri River structures. The Columbus Loup River Bridge is historically significant to the development of Nebraska transportation as an important river crossing; it is technologically significant as a culmination of truss design by the state engineer.

NAME(S) OF STRUCTURE
Columbus Loup River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number S030 37773L; Department of Public Works, **Nineteenth Biennial Report**, 1931-1932, pp. 73, 77; Department of Roads and Irrigation, **Twentieth Biennial Report**, 1933-1934, pp. 30, 83, 96; Plans for "Special Design Class H-15, Columbus Loup River Bridge, 7-160' High Trusses and 2-75' Deck Steel Girders, 24' Roadway, Platte County - prepared by State of Nebraska, Department of Public Works, 1 December 1931; Platte County Supervisors' Record, Book 2: 2 December 1886 (pp.52-53), 14 December 1886 (pp. 56-57), 21 January 1887 (page 96), 12 December 1887 (pp. 194-195), 13 December 1887 (page 208), 7 March 1888 (page 259), 3 October 1888 (page 317); Sheridan County Commissioners Record Book E, 31 August 1933 (page 560), 16 October 1933 (page 571), 3 January 1935 (page 658); field inspection by Clayton Fraser, 16 November 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
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Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Little Muddy Creek Bridge RICH01
NDOR: C007400425

DATE(S) OF CONSTRUCTION
ca.1925

LOCATION
county highway over Little Muddy Creek; S30/31, T2N R18E
1.5 miles northwest of Stella; Richardson County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 22)

CONDITION
good

OWNER
Richardson County

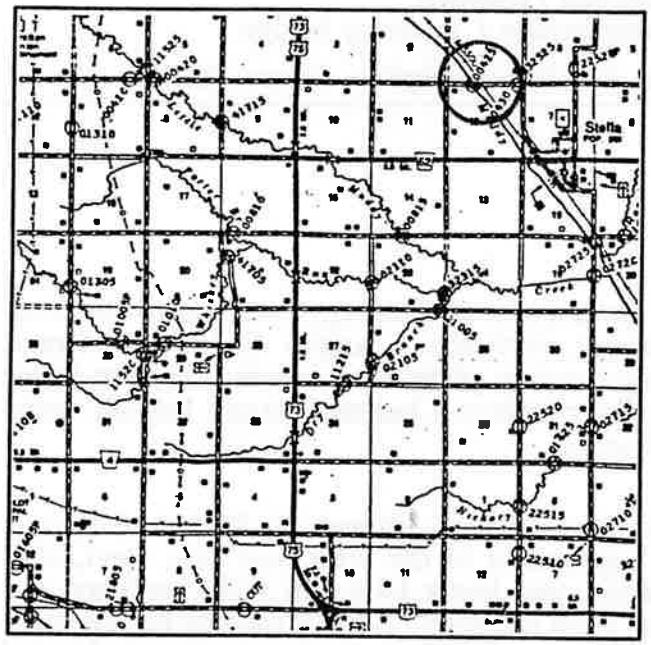
span number:	1	superstructure:	steel, 5-panel, bolted, Pratt pony truss
span length:	100.0'	substructure:	steel pile bent abutments and piers
total length:	165.0'	floor/decking:	wood deck over steel stringers
roadway wdt.:	14.5'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: back-to-back channels with top and bottom battens; verticals: 4 angles tied with battens; diagonals: 2 angles tied with battens; sway bracing: plate knee braces bolted to inside web of verticals and top of floor beams; floor beams: I-beams; bottom lateral: cross-braced circular-section eyerods; railing: channels

This bridge carries a county highway over Little Muddy Creek and is located on the line between Sections 30 and 31, T2N, R18W, Rulo Precinct. The bridge is built on a skew, and consists of three spans: two steel stringer approaches to the west, and one, steel, 100-foot, five-panel, bolted, Pratt pony truss on steel pile bent abutments to the east. The main span has a 14.5-foot wide roadway, and "15 Ton" capacity plates mounted above the hips. The truss appears to be unaltered and has good integrity. County records do not make specific reference to this bridge, but it is virtually identical to five other five-panel, solid-connected, 100-foot, Pratt pony trusses located in Richardson County (see **RICH03, RICH04, RICH06, RICH10** AND **RICH11**). Records indicate that the county built several 100-foot, riveted, pony trusses in the 1920s, and these bridges probably date to the same time period. County records reveal that one of the 100-foot pony trusses was built according to state standardized plans, and the five remaining trusses appear to be based on state plans as well.

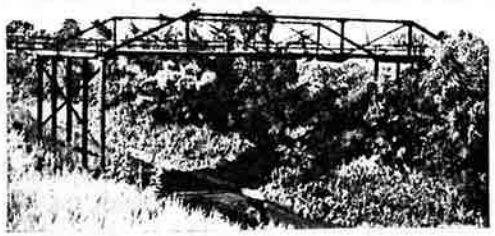
This structure is typical of many pony trusses built in Nebraska during the 1920s.

NAME(S) OF STRUCTURE
Little Muddy Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C007400425; State of Nebraska, "Standard 15-Ton Bridge Plan, 5 Panel-80 Ft. Span-16'-18'-20' Rys," revised 1 January 1923, plan number 1537, located in Bridge Division, Nebraska Department of Roads, Lincoln, Nebraska; Proceedings of the Richardson County Commissioners, 1881-1935, located in Richardson County Courthouse, Falls City, Nebraska, see the following entries: 28 March 1922, volume 11, page 22; 11 April 1922, volume 11, page 25; field inspection by Jeffrey A. Hess, 17 July 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Long Branch Bridge RICH02
NDOR: C007400805

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
county highway over Long Branch; S17/20, T3N R13E
3 miles north, 1.7 miles west of Humboldt; Richardson County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 24)

CONDITION
good

OWNER
Richardson County

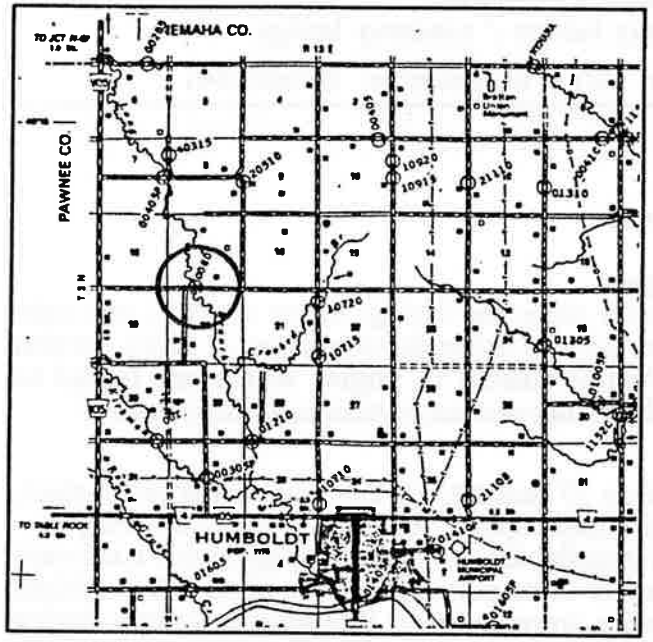
span number:	1	superstructure:	steel, 5-panel, pin-connected Pratt pony truss
span length:	90.0'	substructure:	steel pile bent abutments and piers
total length:	122.0'	floor/decking:	double-layer wood deck over I-beam stringers
roadway wdt.:	15.6'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: ; verticals: 4 angles with battens; diagonals: 2 square-section eyerods; counters: 2 spare section eyerods with turnbuckles; floor beams: I-beams riveted to angles which are bolted to hanger plates; bottom lateral; cross-braced circular-section eyerods; railing: lattice

This bridge carries a county road over Long Branch and is located on the line between Sections 17 and 20, T3N, R13E, Franklin Precinct. The bridge consists of three spans: two steel stringer approaches (located at either end of the main span), and one steel, five-panel, pin-connected Pratt pony truss with a 15.6-foot roadway. As late as 1910, the county board usually did not build bridges with roadways wider than 14 feet. In the 1920s, the county appears to have relied chiefly on riveted, rather than pinned, construction. This bridge, therefore, was probably built between these dates, ca.1915. Several different bridge companies were active in Richardson County during the 1910s, and it is not possible to determine which might have constructed this bridge.

The Long Branch Bridge is typical of many pony trusses built in Nebraska during the 1910s.

NAME(S) OF STRUCTURE
Long Branch Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C007400805; Proceedings of the Richardson County Commissioners, 1881-1935, located in Richardson County Courthouse, Falls City, Nebraska, see entry dated 13 August 1910, volume 9, page 6; field inspection by Jeffrey A. Hess, 19 July 1989.

INVENTORIED BY
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AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Little Muddy Creek Bridge RICH03
NDOR: C007400815

DATE(S) OF CONSTRUCTION
ca.1925

LOCATION
county highway over Little Muddy Creek; S14/23, T3N R14E
0.5 mile south, 2 miles west of Stella; Richardson County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 22)

CONDITION
good

OWNER
Richardson County

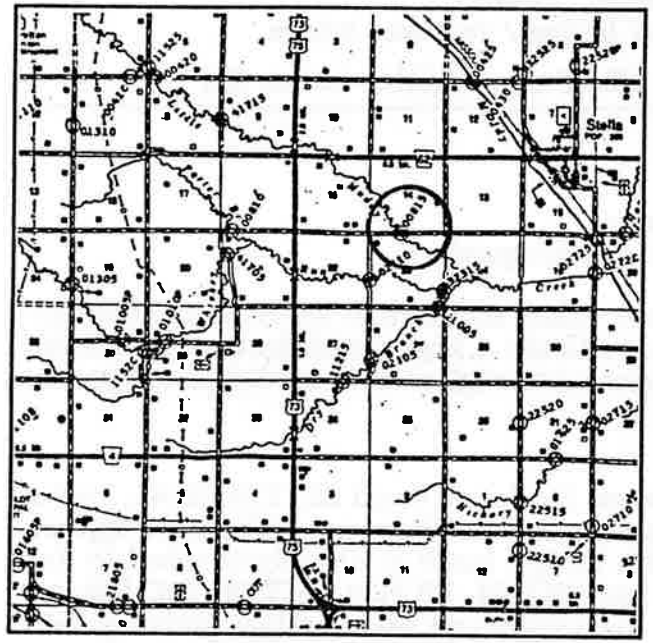
span number:	1	superstructure:	steel, 5-panel, rigid-connected Pratt pony truss
span length:	100.0'	substructure:	steel pile bent abutments with timber back- and wingwalls
total length:	102.0'	floor/decking:	concrete deck over steel stringers
roadway wdt.:	19.0'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: back-to-back channels with top and bottom battens; verticals: 4 angles with battens; diagonals: 2 angles with battens; floor beams: I-beams riveted to angles which are bolted to gussets; railing: channel rails

This bridge carries a county highway over Little Muddy Creek and is located on the line between Sections 14 and 23, T3N, R14E, Porter Precinct. The bridge is a single-span steel, 100-foot, five-panel, bolted, Pratt pony truss on steel pile bent abutments. The truss appears to be unaltered and has good integrity. County records do not make specific reference to this bridge, but it is virtually identical to five other five-panel, solid-connected, 100-foot, Pratt pony trusses located in Richardson County (see **RICH01, RICH04, RICH06, RICH10** and **RICH11**). Records indicate that the county built several 100-foot, riveted, pony trusses in the 1920s, and these bridges probably date to the same time period. All five remaining trusses appear to be based on state standardized plans.

The Little Muddy Creek Bridge is typical of many pony trusses built in Nebraska during the 1920s.

NAME(S) OF STRUCTURE
Little Muddy Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C007400815; State of Nebraska, "Standard 15-Ton Bridge Plan, 5 Panel-80 Ft. Span-16'-18'-20' Rys," revised 1 January 1923, plan number 1537, located in Bridge Division, Nebraska Department of Roads, Lincoln, Nebraska; Proceedings of the Richardson County Commissioners, 1881-1935, located in Richardson County Courthouse, Falls City, Nebraska, see the following entries: 28 March 1922, volume 11, page 22; 11 April 1922, volume 11, page 25; field inspection by Jeffrey A. Hess, 17 July 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Fourmile Creek Bridge RICH04
NDOR: C007401105

DATE(S) OF CONSTRUCTION
ca.1925

LOCATION
county highway over Fourmile Creek; S11/12, T1N R13E
4.5 miles west, 3.5 miles south of Dawson; Richardson County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 22)

CONDITION
good

OWNER
Richardson County

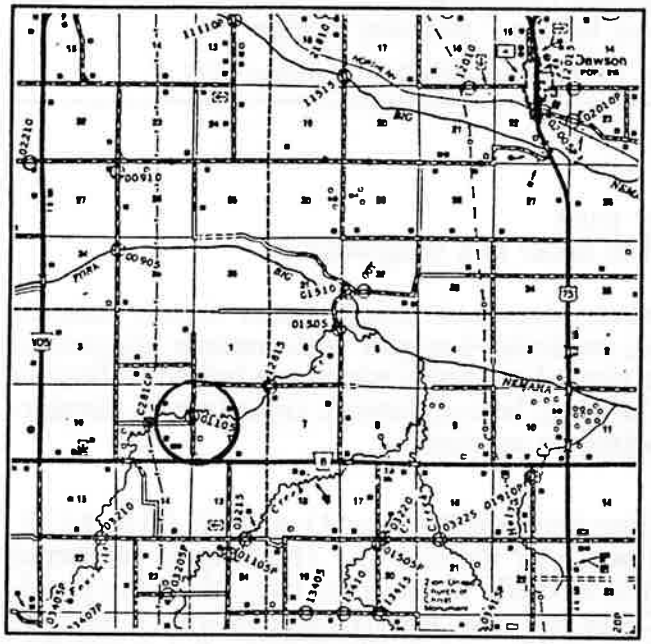
span number:	1	superstructure:	steel, five-panel, rigid-connected Pratt pony truss
span length:	100.0'	substructure:	bolted, steel pile bent abutments with timber back- and wingwalls
total length:	101.0'	floor/decking:	concrete deck over I-beam stringers
roadway wdt.:	17.6'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: back-to-back channels with top and bottom battens; verticals: 4 angles with battens; diagonals: 2 angles with battens; floor beams: I-beams riveted to angles which are bolted to bottom of verticals; sway bracing: solid plate knee bracing; bottom lateral: cross-braced circular-section eyerods; railing: 2 channels rails bolted to verticals

This bridge carries a gravel-surfaced county road over Fourmile Creek and is located on the line between Sections 11 and 12, T1N, R13E, Speiser Precinct. The bridge is a single-span, five-panel, bolted, Pratt pony truss on steel pile bent abutments. The truss is unaltered and has good integrity. County records do not make specific reference to this bridge, but it is virtually identical to five other five-panel, solid-connected, 100-foot, Pratt pony trusses located in Richardson County (see **RICH01, RICH03, RICH06, RICH10** and **RICH11**). Records indicate that the county built several 100-foot, riveted, pony trusses in the 1920s, and these bridges probably date to the same time period. All five remaining trusses appear to be based on state plans.

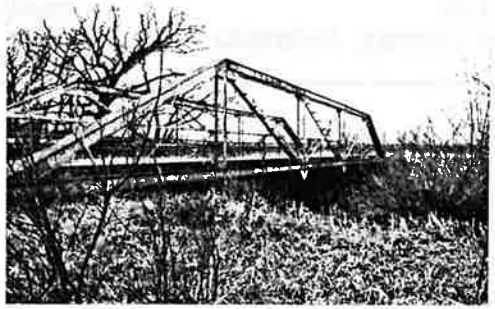
The Four Mile Creek Bridge is typical of many pony trusses built in Nebraska during the 1920s.

NAME(S) OF STRUCTURE
Fourmile Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C007401105; State of Nebraska, "Standard 15-Ton Bridge Plan, 5 Panel-80 Ft. Span-16'-18'-20' Rys," revised 1 January 1923, plan number 1537, located in Bridge Division, Nebraska Department of Roads, Lincoln, Nebraska; Proceedings of the Richardson County Commissioners, 1881-1935, located in Richardson County Courthouse, Falls City, Nebraska, see the following entries: 28 March 1922, volume 11, page 22; 11 April 1922, volume 11, page 25; field inspection by Demian Hess, 11 March 1990.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Long Branch Bridge RICH05
NDOR: C007401210

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
county highway over Long Branch; S28/33, T3N R13E
1 mile north, 1 mile west of Humboldt; Richardson County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 24)

CONDITION
good

OWNER
Richardson County

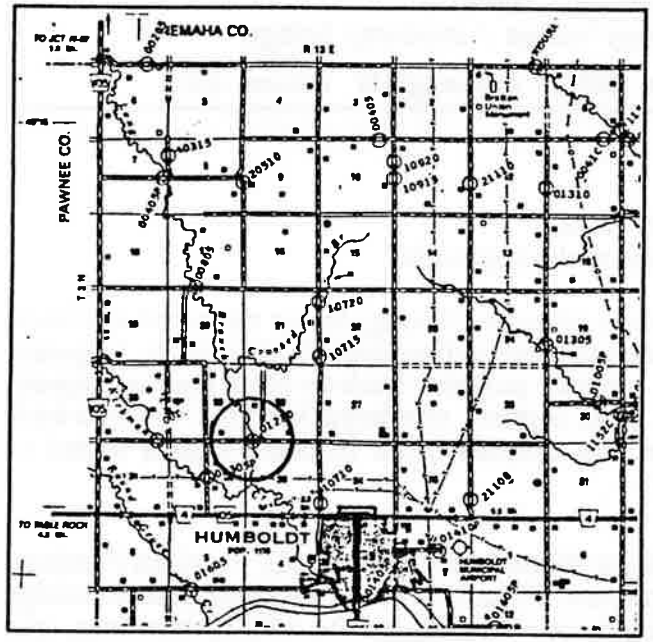
span number:	1	superstructure:	steel, 6-panel, pin-connected Pratt through truss
span length:	90.0'	substructure:	steel pile bent abutments with timber back- and wingwalls
total length:	90.0'	floor/decking:	wood deck over steel stringers
roadway wdt.:	11.2'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: to eye bars; verticals: 2 channels with lacing; hip verticals: square-section eyerod; diagonals: 2 square-section eyerods; counters: square-section eyerod; portals: back-to-back angles, crossed lattice bars are sandwiched between top strut angles; overhead bracing: back-to-back angles; top lateral: cross-braced circular-section eyerods; floor beams: I-beams bolted to angles which are riveted to hanger plates

This bridge carries a county-road over Long Branch and is located on the line between Sections 28 and 33, T3N, R13E, Franklin Precinct. It is a single-span, steel, six-panel, pin-connected Pratt through truss on steel pile bent abutments. County records indicate that no bridge was located at this site in June 1912. The county seems to have preferred riveted to pinned construction by the 1920s, however, and so the bridge was probably erected ca.1915. The truss is unaltered and has good integrity.

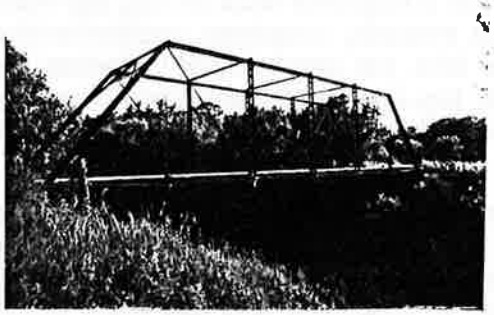
The Long Branch Bridge is typical of many through trusses built in Nebraska in the 1910s.

NAME(S) OF STRUCTURE
Long Branch Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C007401210; Proceedings of the Richardson County Commissioners, 1881-1935, located in Richardson County Courthouse, Falls City, Nebraska; County Bridge Record, 10 June 1912, located in Richardson County Courthouse; field inspection by Jeffrey A. Hess, 19 July 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Big Nemaha River Bridge RICH06
NDOR: C007402810

DATE(S) OF CONSTRUCTION
main: ca.1925; north approaches: ca.1915

LOCATION
county highway over the Big Nemaha River; S5/8, T1N, R13E
6 miles south, 1.5 miles west of Humboldt; Richardson County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 26)

CONDITION
good

OWNER
Richardson County

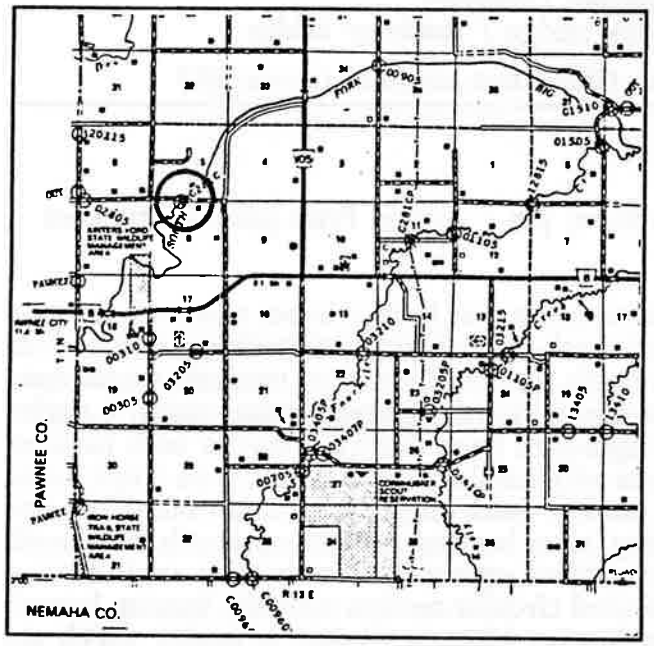
span number:	1	superstructure:	steel, 7-panel, riveted Camelback through truss; pin / riveted Pratt pony approaches
span length:	150.0'	substructure:	steel pile bent abutments and piers
total length:	320.0'	floor/decking:	wood deck over I-beam stringers
roadway wdt.:	14.8'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord (main span and second approach span from north, only): back-to-back channels with top and bottom battens; lower chord (first approach from north, only): 2 eyebars; verticals (main span only): back-to-back channels with lacing; verticals (north approach spans only): 4 angles with battens; diagonals (main and second approach from north): 2 angles with battens; counter (first approach from north): 2 eyebars with turnbuckles; portals (main only): back-to-back angles; sway bracing (main only): back-to-back angle top and bottom struts tied by single angle, intermediate diagonal bracing; sway bracing (second approach from north only): solid plate knee bracing; sway bracing (first approach from north): angle-section outriggers; top lateral (main only): cross-braced circular-section eyerods; bottom lateral: cross-braced circular-section eyerods; floor beams: I-beams riveted to angles which are bolted to hanger plates--hanger plate bolted to bottom of vertical; railing (main and second approach from north): channel rails; railing (first approach from north): lattice

This bridge carries a county road over the Big Nemaha River on the line between Sections 5 and 8, T1N, R13E, Speiser Precinct. The bridge is composed, from south to north, of the following four spans: one steel stringer approach; one seven-panel, bolted, Camelback through truss; one five-panel, riveted, Pratt pony truss; and one three-panel, pinned Pratt pony truss. The main span is approximately 20 feet wide from curb-to-curb, while the northern approach spans are only 14.8 feet wide. Although county records do not provide a construction date, the different widths and designs of the spans clearly indicate that they were not built at the same time. Judging from its wide roadway and long span, the Camelback truss probably dates to ca.1925. The northern approaches were probably moved to the bridge site at a later time, as the river channel widened. Based on their narrow width, both Pratt trusses appear to have been fabricated ca.1915. All of the trusses appear to be unaltered and the bridge has good integrity.

All the trusses in this structure are typical examples of Nebraska bridge construction.

NAME(S) OF STRUCTURE
Big Nemaha River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C007402810; Proceedings of the Richardson County Commissioners, 1881-1935, located in Richardson County Courthouse, Falls City, Nebraska; field inspection by Jeffrey A. Hess, 23 July 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Gunzenhauser's Bridge [Four Mile Creek Bridge] RICH07
NDOR: C007402810P

DATE(S) OF CONSTRUCTION
1912

LOCATION
closed county highway over Fourmile Creek; S11, T1N, R13E
6.5 miles south, 0.5 mile east of Humboldt; Richardson County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / abandoned

RATING NRHP non-eligible (score: 36)

CONDITION
good

OWNER
Richardson County

span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt pony truss
span length:	60.0'	substructure:	steel pile bent abutments with timber backwall, wood pile piers
total length:	114.0'	floor/decking:	wood deck over steel stringers
roadway wdt.:	14.0'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: 2 eyebars; verticals: 4 angles with lacing; diagonals: 2 eyebars; counters: circular-section eyerod with turnbuckle; floor beams: I-beams; bottom lateral: cross-braced circular-section eyerods; railing: lattice; builder's plate: **Clinton Bridge and Iron Works, Clinton, Iowa**

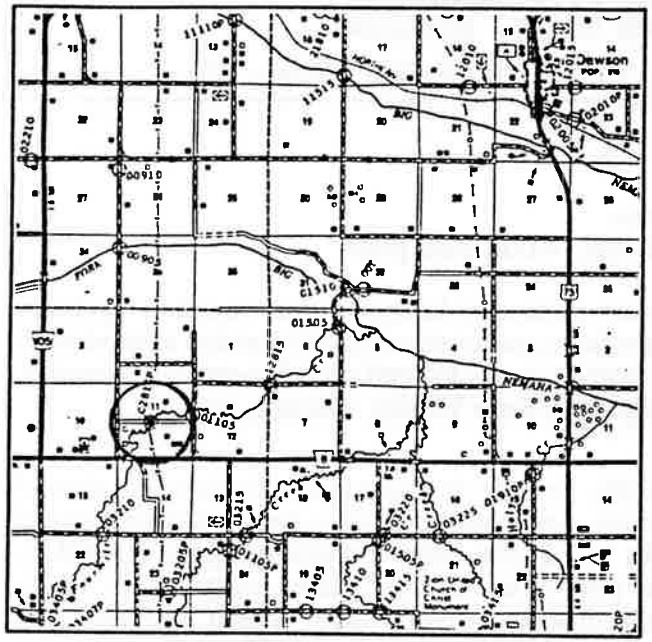
Now abandoned, this bridge crosses Fourmile Creek near the center of Section 11, T1N, R13E, Speiser Precinct. The bridge consists of three spans: 2 steel stringer approaches (one to the east of the main span, and one to the west), and one steel, four-panel, pin-connected Pratt pony truss on wood pile piers. This was one of ten steel spans erected by the county in 1912 (the other remaining span: **RICH17**). In the early 1900s, all of the steel bridges in the county were erected by contractors, often as part of an annual bridge contract. In 1906, however, the county board moved to reject the bridge bid of the John B. Gilligan Bridge Company of Falls City, which had won the annual contracts in most previous years, arguing that the contractors had fixed their prices in a pooling agreement. The county bridge committee declared that "the bidders who were supposed to be competitors of the John Gilligan Bridge Co. were mere stool-pigeons imported here for no other purpose than to drag the game into the net..." The committee therefore declared that "the time has now come for the county to build there [sic] own bridges..., [and] recommend that... the County Board purchase material and erect at actual cost of labor all bridges required for the ensuing year." The decision proved controversial and unpopular, but the county was regularly building its own bridges by 1912. In that year, the board purchased materials for its bridges from both the Clinton Bridge and Iron Works and the Omaha Structural Steel Works. A bridge plate mounted on the southwest endpost of this structure identifies the Clinton Bridge and Iron Works as its fabricator. The bridge was probably built according to plans prepared by the county in 1903 and modified in 1904 and 1905. According to county records, work began on this steel bridge on September 23, 1912. The bridge was completed by October 1, 1912. The total cost was $1059.93. Although currently abandoned, the truss is unaltered and has good integrity.

Gunzenhauser's Bridge is typical of many pony trusses built in Nebraska during the 1910s. However, it is an important example of early county efforts to rationalize bridge building, and illustrates turn-of-the-century dissatisfaction with bridge companies. This disgruntlement encouraged the rise in power of the state highway department and the development of standardized bridges in the state.

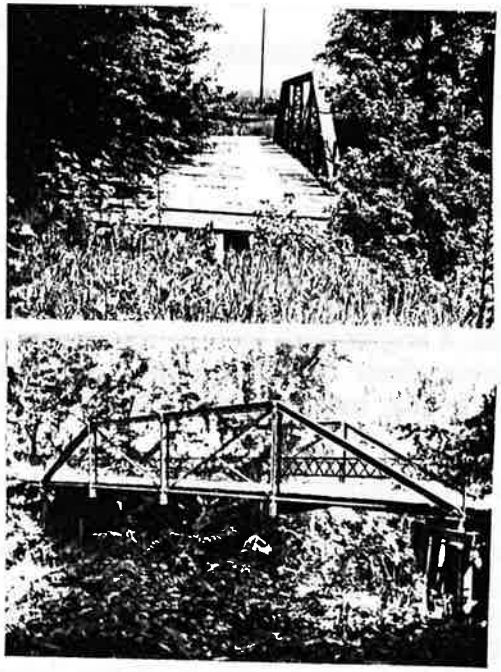
NAME(S) OF STRUCTURE

Gunzenhauser's Bridge [Four Mile Creek Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C007402810P; Proceedings of the Richardson County Commissioners, located in Richardson County Courthouse, Falls City, Nebraska, see the following entries: 3 October 1906, volume 8, page 163-4; 22 November 1906, volume 8, page 185-7; 9 January 1913, volume 9, page 218; Bridge Record, located in Richardson County Courthouse, entry for bridge number 83, page 1; field inspection by Jeffrey A. Hess, 23 July 1989.

INVENTORIED BY

Demian Hess

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge RICH08
NDOR: C007403205

DATE(S) OF CONSTRUCTION
ca.1900

LOCATION
county road over stream; S17/20, T1N, R13E
8 miles south, 1.5 miles west of Humboldt; Richardson County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 24)

CONDITION
good

OWNER
Richardson County

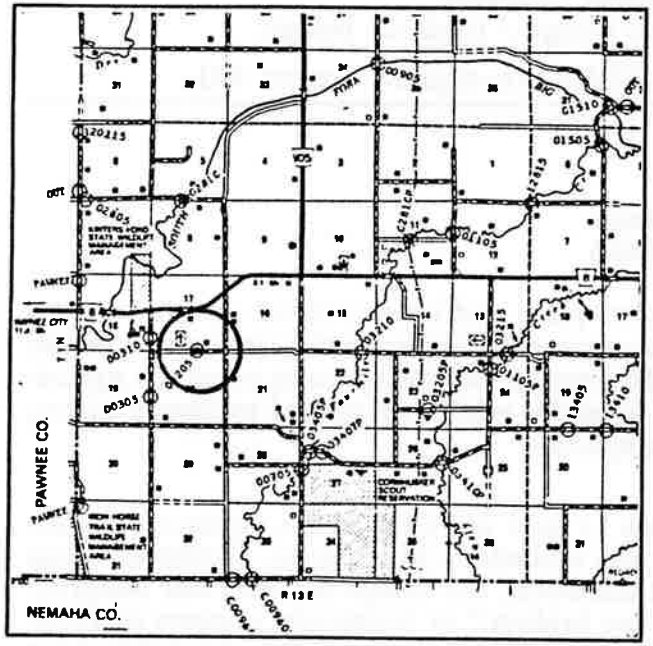
span number:	1	superstructure:	steel, 3-panel, pin-connected truss leg bedstead
span length:	40.0'	substructure:	riveted box-section steel legs with concrete sills
total length:	56.0'	floor/decking:	wood deck over wood stringers
roadway wdt.:	13.8'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: 2 angles tied by battens (end panels), 2 square-section eyerods (center panel); verticals: 4 angles tied with lacing to form an I-section; diagonals: 2 square-section eyerods; counters: square-section eyerod; floor beams: I-beams bolted to angles which are riveted to hanger plates; bottom lateral: cross-braced circular-section eyerods

This bridge carries a minimally improved county road over a small stream between Sections 17 and 20, T1N, R13E, Speiser Precinct. The structure is a three-panel, truss leg bedstead. Originally, the truss was carried by steel legs embedded in concrete. However, scour has undermined the west legs, and the west end is now supported by steel piles. Due to the alteration, the bridge has only fair integrity. County records do not provide any information on this structure, but the first reference to "leg bridges," or bedsteads, appears in 1898. Bedstead trusses were first used in Nebraska around 1896 and lost popularity in the early 1900s. This bridge, therefore, probably dates to ca.1900. Several different bridge builders were active in the county at the turn of the century, and the builder for this span cannot be determined.

This bridge is an uncommon example of bedstead truss construction. Unfortunately, due to alterations, the bridge lacks integrity and is not eligible for the National Register.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C007403205; Proceedings of the Richardson County Commissioners, 1881-1935, located in Richardson County Courthouse, Falls City, Nebraska; field inspection by Jeffrey A. Hess, 23 July 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Goolsby Creek Bridge RICH09
NDOR: C007411440

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
county highway over Goolsby Creek; S33, T3N, R16E/S4, T2N, R13E
3 miles south, 2 miles west of Barada; Richardson County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 19)

CONDITION
good

OWNER
Richardson County

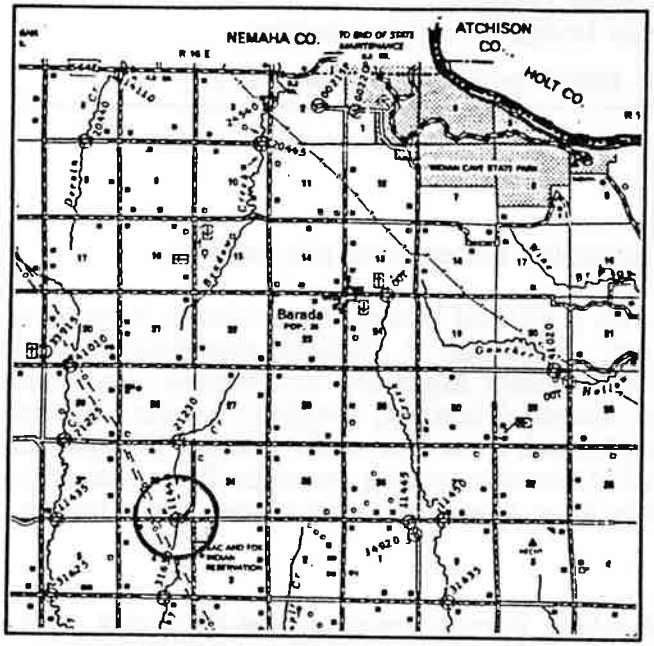
span number:	1	superstructure:	steel, 6-panel, pin-connected Pratt through truss
span length:	108.0'	substructure:	timber/steel pile abutments with timber backwalls; bolted steel pile bent pier
total length:	127.0'	floor/decking:	wood deck over I-beam stringers
roadway wdt.:	15.6'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: 2 eyebars; verticals: back-to-back channels with lacing; diagonals: 2 eyebars; counters: square-section eyerod with turnbuckles; portals: back-to-back angle top and bottom struts and diagonal bracing, single angle intermediate diagonal bracing; overhead struts: channel section with riveted top and bottom plates; top lateral: cross-braced circular-section eyerods with turnbuckles; bottom lateral: cross-braced circular-section eyerods; floor beams: I-beams, fastened to superstructure by U-bolts hung over lower pin connections; railing: 2 angles rails on angle posts

This bridge carries a county road over Goolsby Creek on the line between Section 33, T3N, R16E, Barada Precinct, and Section 4, T2N, R13E, Ohio Precinct. The bridge consists of a pin-connected Pratt through truss with a steel stringer span on the west approach. The truss has a roadway width of 15.6 feet. The bridge is largely unaltered and has good integrity. County records do not provide a construction date, but the truss's relatively wide roadway and pinned construction suggest it is ca.1915. As late as 1910, most county bridges were apparently only 14 feet wide, and the county apparently preferred riveted and bolted connections to pinned in the 1920s.

The Goolsby Creek Bridge is typical of many through trusses built in Nebraska during the 1910s.

NAME(S) OF STRUCTURE
Goolsby Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C007411440; Proceedings of the Richardson County Commissioners, 1881-1935, located in the Richardson County Courthouse, Falls City, Nebraska; field inspection by Demian Hess, 11 March 1990.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Muddy Creek Bridge
NDOR: C007413710

RICH10

DATE(S) OF CONSTRUCTION
ca.1925

LOCATION
county highway over Muddy Creek; S24, T2N, R15E/S19, T2N, R16E
1.5 miles south, 2 miles east of Verdon; Richardson County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 22)

CONDITION
good

OWNER
Richardson County

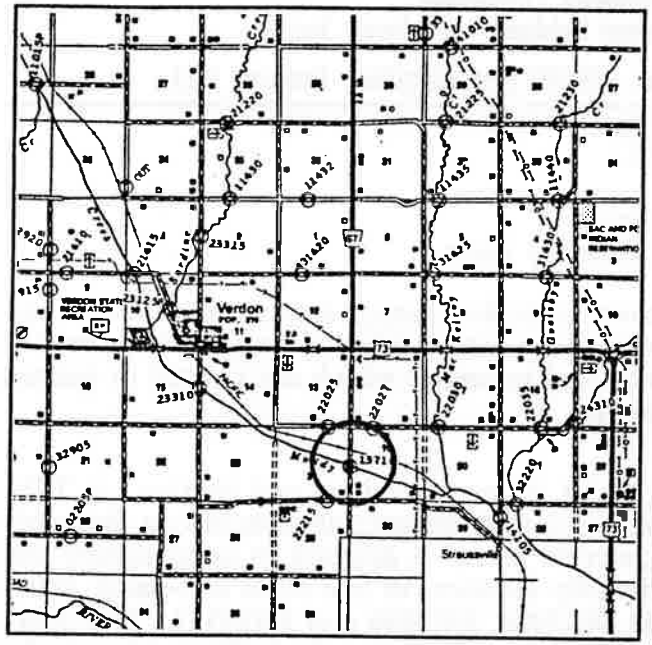
span number:	1	superstructure:	steel, 5-panel, rigid-connected Pratt pony truss
span length:	100.0'	substructure:	steel pile bent abutments and two-legged concrete piers
total length:	196.0'	floor/decking:	concrete deck over I-beams stringers
roadway wdt.:	18.4'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: 2 channels with top and bottom battens; verticals: web-plate with 4 riveted angles; diagonals: 2 angles with battens; floor beams: I-beams riveted to angles which are riveted to bottom of verticals; bottom lateral: cross-braced angles

This bridge carries a county road over Muddy Creek on the line between Section 24, T2N, R15E, Liberty Precinct, and Section 19, T2N, R16E, Ohio Precinct. The bridge is composed of a steel, 5-panel, riveted Pratt pony truss with two steel stringer approaches on the south and one steel stringer approach on the north. The truss is carried by large, two-legged, concrete piers. It appears to be unaltered and has good integrity. County records do not make specific reference to this bridge, but it is virtually identical to five other five-panel, solid-connected, 100-foot, Pratt pony trusses located in Richardson County (see **RICH01, RICH03, RICH04, RICH06** and **RICH11**). This span, however, is the only one of the group built on concrete piers, and it employs slightly heavier construction, namely, built-up I-beams for verticals. The more substantial construction may indicate that the bridge was once part of an early county or state highway. Records indicate that the county built several 100-foot, riveted pony trusses in the 1920s, and these bridges probably date to the same time period. All five remaining trusses appear to be based on state plans.

The Muddy Creek Bridge is fairly typical of many pony trusses built in Nebraska during the 1920s.

NAME(S) OF STRUCTURE
Muddy Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C007413710; State of Nebraska, "Standard 15-Ton Bridge Plan, 5 Panel-80 Ft. Span-16'-18'-20' Rys," revised 1 January 1923, plan number 1537, located in Bridge Division, Nebraska Department of Roads, Lincoln, Nebraska; Proceedings of the Richardson County Commissioners, 1881-1935, located in Richardson County Courthouse, Falls City, Nebraska, see the following entries: 28 March 1922, volume 11, page 22; 11 April 1922, volume 11, page 25; field inspection by Demian Hess, 11 March 1990.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Pony Creek Bridge RICH11
NDOR: C007413840

DATE(S) OF CONSTRUCTION
ca.1925

LOCATION
county highway over Pony Creek; S33, T1N, R16E
3 miles south, 1.5 miles west of Falls City; Richardson County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 22)

CONDITION
good

OWNER
Richardson County

span number:	1	superstructure:	steel, 5-panel, rigid-connected Pratt pony truss
span length:	100.0'	substructure:	abutments: steel piles embedded in concrete
total length:	102.0'	floor/decking:	concrete beck over I-beam stringers
roadway wdt.:	19.2'	other features:	upper chord: back-to-back channels with cover plate and double lacing; lower chord: back-to-back channels with top and bottom battens; verticals: web plate with riveted angles; diagonals: 2 angles with battens; bracing: solid plate knee bracing; floor beams: I-beams bolted to bottom of verticals; bottom lateral: cross-braced angles

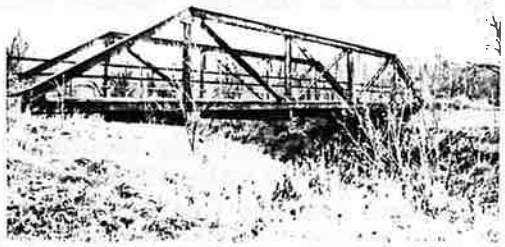
This bridge carries a county road over Pony Creek. It is located on the Nebraska/Kansas line, on the south edge of Section 33, T1N, R16E, Falls City Precinct. The bridge is a single-span, five-panel, riveted/bolted, Pratt pony truss. It is unaltered and in good condition. County records do not provide a construction date, but the bridge is virtually identical to five other five-panel, solid-connected, 100-foot, Pratt pony trusses located in Richardson County (see **RICH01**, **RICH03**, **RICH04**, **RICH06** and **RICH10**). This span, however, has slightly heavier construction and employs knee-bracing. Records indicate that the county built several 100-foot, riveted pony trusses in the 1920s, and these bridges probably date to the same time period. All five remaining trusses appear to be based on state plans.

The Pony Creek Bridge is typical of many pony trusses built in Nebraska during the 1920s.

NAME(S) OF STRUCTURE
Pony Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION

LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C007413840; State of Nebraska, "Standard 15-Ton Bridge Plan, 5 Panel-80 Ft. Span-16'-18'-20' Rys," revised 1 January 1923, plan number 1537, located in Bridge Division, Nebraska Department of Roads, Lincoln, Nebraska; Proceedings of the Richardson County Commissioners, 1881-1935, located in Richardson County Courthouse, Falls City, Nebraska, see the following entries: 28 March 1922, volume 11, page 22; 11 April 1922, volume 11, page 25; field inspection by Demian Hess, 11 March 1990.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Sardine Branch Bridge RICH12
NDOR: C007421220

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
county highway over Sardine Branch; S26/35, T3N, R15E
3 miles south, 0.7 mile west of Shubert; Richardson County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 22)

CONDITION
good

OWNER
Richardson County

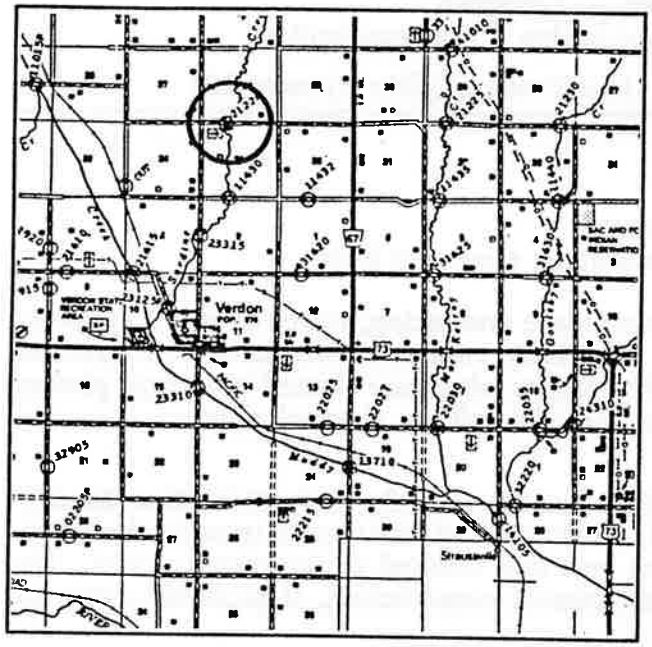
span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt pony truss
span length:	70.0'	substructure:	timber/steel pile abutments with timber backwalls; steel pile bent
total length:	75.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	14.5'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: 2 eyebars; verticals: 4 angles with battens; diagonals: 2 eyebars; counters: circular-section eyerods with turnbuckle; floor beam: I-beam riveted to angles which are riveted to hanger plates; bottom lateral: cross-braced circular-section eyerods; railing: channel rails

This bridge carries a county road over Sardine Branch and is located on the line between Sections 26 and 35, T3N, R15E, East Muddy Precinct. The bridge has two spans: a steel stringer approach to the east, and a four-panel, pin-connected Pratt pony truss to the west. The truss is unaltered and has good integrity. County records indicate that Sardine Branch was first crossed at this site in 1904. No construction date is available for the current bridge, but based on its narrow roadway and pinned construction, it probably dates to ca.1915.

The Sardine Branch Bridge is typical of many pony trusses built in Nebraska during the 1910s.

NAME(S) OF STRUCTURE
Sardine Branch Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C007421220; Proceedings of the Richardson County Commissioners, 1881-1935, located in Richardson County Courthouse, Falls City, Nebraska, see entry dated 13 October 1904, volume 8, page 9; field inspection by Jeffrey A. Hess, 19 July 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Muddy Creek Bridge
NDOR: C007421615

RICH13

DATE(S) OF CONSTRUCTION
ca.1925

LOCATION
county highway over Muddy Creek; S3/10, T2N, R15E
0.5 mile northwest of Verdon; Richardson County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 17)

CONDITION
good

OWNER
Richardson County

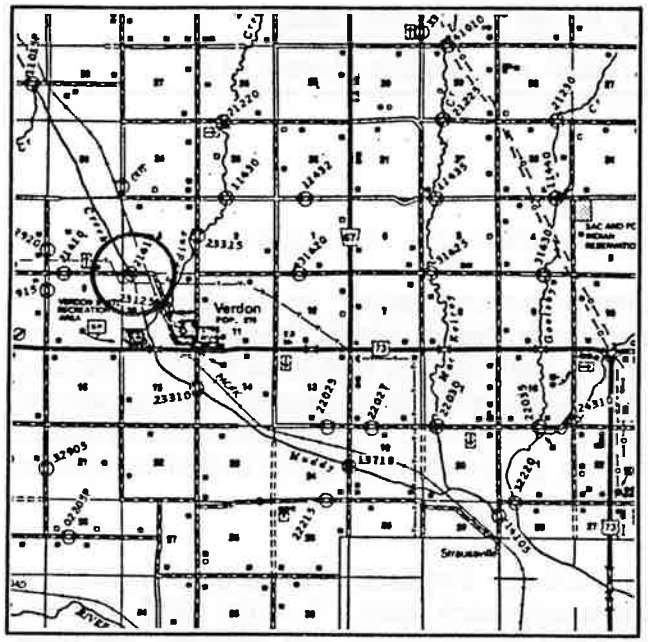
span number:	1	superstructure:	steel, 7-panel, rigid-connected Pratt through truss
span length:	120.0'	substructure:	bolted steel pile bent abutments with timber backwalls and wingwalls
total length:	182.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.7'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: back-to-back channels with top and bottom battens; verticals: back-to-back channels with lacing; diagonals: 2 angles with battens; portals: back-to-back angles; overhead struts: T-section composed of solid plate and riveted angles; top lateral: cross-braced circular-section eyerods; bottom lateral: cross-braced circular-section eyerods; floor beams: I-beams bolted to angles which are bolted and riveted to hanger plates--hanger plate bolted to bottom of verticals; railing: 2 channel rails bolted to channel posts

This bridge carries a county road over Muddy Creek between Sections 3 and 10, T2N, R15E, Liberty Precinct. The bridge consists of a 120-foot, rigid-connected Pratt through truss, flanked on each side by a single steel stringer approach span. In July 1923, the 60-foot steel truss at this site had slipped into Muddy Creek. Although the county board ordered the bridge raised and repaired, the truss was apparently replaced within a few years by the current structure. The county board minutes do not provide a construction date, but based on the current truss's 15.7-foot roadway and long span, it is probably ca.1925. The bridge does not appear to conform to state standardized plans for 120-foot trusses, having cross-braced diagonals in the three center panels rather than just in the central panel, and a lower chord composed of channel sections rather than angle sections.

The Muddy Creek Bridge is typical of many through trusses built in Nebraska during the 1920s.

NAME(S) OF STRUCTURE
Muddy Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C007421615; State of Nebraska, "Standard Bridge Plan, 120 Foot Span, 7-Panel High Truss-Riveted Concrete Floor," 1918, plan number 379, located in Bridge Division, Nebraska Department of Roads, Lincoln, Nebraska; Proceedings of the Richardson County Commissioners, 1881-1935, located in Richardson County Courthouse, Falls City, Nebraska, see entry for 17 Jul 1923, volume 11, page 22; field inspection by Demian Hess, 11 March 1990.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Mackrelroy Creek Bridge RICH14
NDOR: C007422030

DATE(S) OF CONSTRUCTION
1904

LOCATION
county highway over Mackelroy Creek; S17/20, T2N, R16E
3 miles east, 1 mile south of Verdon; Richardson County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 40)

CONDITION
good

OWNER
Richardson County

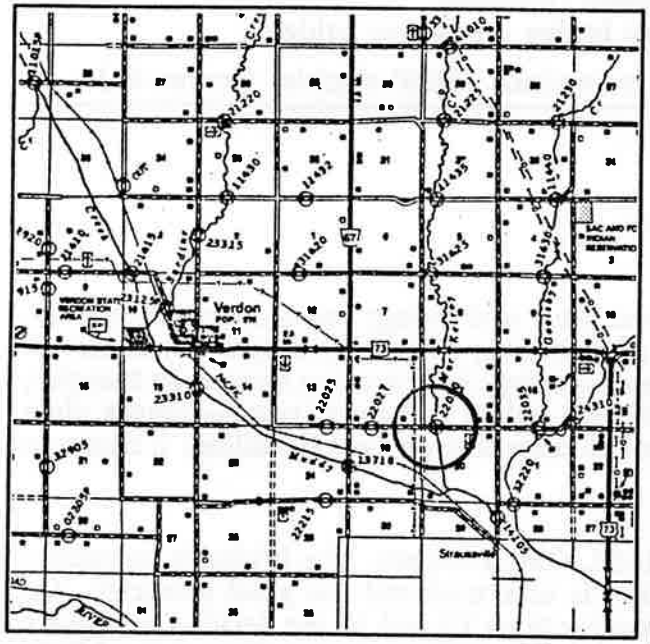
span number:	1	superstructure:	steel, 5-panel, pin-connected Pratt pony truss
span length:	90.0'	substructure:	bolted steel pile bent abutments and piers
total length:	109.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	12.5'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: 2 eyebars; verticals: 4 angles tied with lacing to form an I-section; diagonals: 2 eyebars; counters: 2 square-section eyerods with turnbuckles; sway bracing: knee bracing formed by 2 angles; floor beams: I-beams riveted to angles which are bolted to hanger plates--hanger plate bolted to vertical; bottom lateral: cross-braced circular-section eyerod; railing: 2 channels bolted to verticals and angle posts

This bridge carries a county road over Mackelroy Creek between Sections 17 and 20, T2N, R16E, Ohio Precinct. The bridge is composed of a five-panel, pinned Pratt pony truss with one stringer approach on the east. The structure is unaltered and has good integrity. On July 15, 1904, the county board minutes note that "the bridge over the McElroy Creek between Sections 17 and 20 we decided to replace with a steel bridge which has been ordered." The county board ordered the bridge from the John B. Gilligan Bridge Company of Falls City, which had been the low-bidder on the annual bridge contract. Gilligan had been constructing bridges in the county since 1894, and was the primary contractor from 1900 to 1906. The county did not rely on Gilligan to supply bridge plans, however, having prepared its own plans for steel bridges in 1903.

The Mackelroy Creek Bridge is typical of many pony trusses built in Nebraska during the early 1900s. The structure is noteworthy for its early construction date, its span length and its good state of preservation.

NAME(S) OF STRUCTURE
Mackrelroy Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C007422030; Proceedings of the Richardson County Commissioners, 1894-1906, located in the Richardson County Courthouse, Falls City, Nebraska, see entry dated 15 July 1904, volume 7, page 492; field inspection by Demian Hess, 11 March 1990.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Winnebago Creek Bridge
NDOR: C007425715

RICH15

DATE(S) OF CONSTRUCTION
ca.1935

LOCATION
county highway over Winnebago Creek; S14/15, T2N, R17E
2 miles west, 6 miles north of Rulo; Richardson County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 31)

CONDITION
good

OWNER
Richardson County

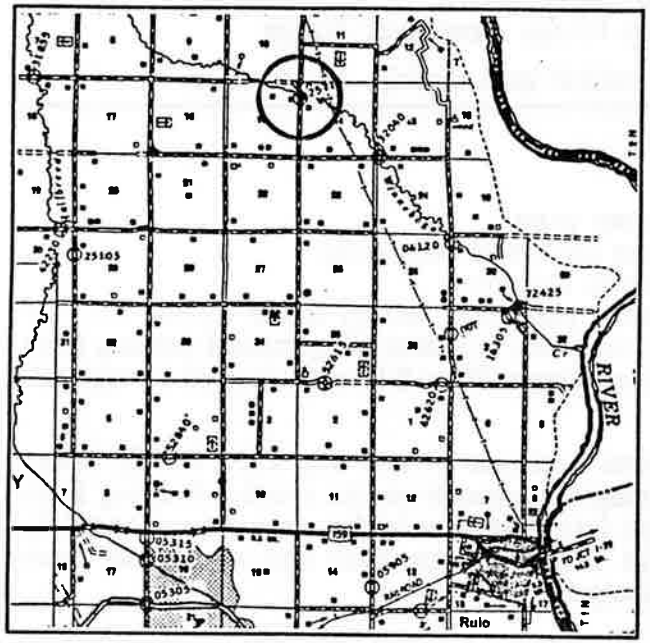
span number:	1	superstructure:	steel, 5-panel, rigid-connected Camelback pony truss
span length:	100.0'	substructure:	welded steel pile bent abutments with timber back and wingwalls
total length:	131.0'	floor/decking:	concrete and corrugated steel deck over I-beam stringers
roadway wdt.:	23.8'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: back-to-back channels with top and bottom battens; verticals: I-beams; diagonals: I-beams; floor beams: I-beams; bottom lateral: cross-braced angles; railing: 2 I-beams bolted to verticals

This bridge carries a county road over Winnebago Creek and is located on the line between Sections 14 and 15, T2N, R17E, Arago Precinct. The bridge is composed of a five-panel, riveted Camelback pony truss with one stringer approach on the south. Judging from the heavy truss construction and wide roadway, it was probably fabricated ca.1935. By that late date, the bridge was almost certainly based on state standardized plans. State records note that some repair work was done in 1967. A new deck and abutments were probably added at that time. These alterations are minor, and the bridge possesses good integrity.

The Winnebago Creek Bridge is typical of bridge construction in Nebraska during the 1930s.

NAME(S) OF STRUCTURE
Winnebago Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C007425715; Proceedings of the Richardson County Commissioners, 1881-1935, located in Richardson County Courthouse, Falls City, Nebraska; field inspection by Demian Hess, 11 March 1990.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Whiskey Run Bridge
NDOR: C007432315

RICH16

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
county highway over Whiskey Run; S23/24, T3N, R14E
1.5 miles west, 1.7 miles south of Stella; Richardson County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 31)

CONDITION
good

OWNER
Richardson County

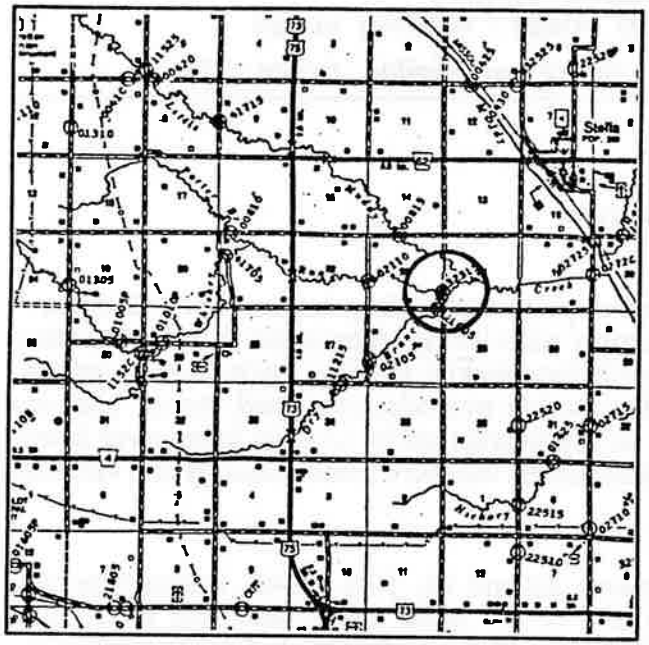
span number:	1	superstructure:	steel, 5-panel, pin-connected Pratt through truss
span length:	83.0'	substructure:	steel pile bent abutments and piers
total length:	122.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	15.7'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: 2 square-section eyerods; verticals: back-to-back channels with lacing; diagonals: 2 square-section eyerods; counters: circular-section eyerod with turnbuckle; portals: back-to-back angles; top and bottom lateral: cross-braced circular-section eyerods; overhead struts: back-to-back angles; floor beams: I-beams fastened to superstructure by U-bolts hung over lower pin connections; railing: angle rails; endpost-mounted builder's plate: **Built by the Western Bridge & Construction Co. Omaha. Neb.**

This bridge carries a county road over Whiskey Run and is located on the line between Sections 23 and 24, T3N, R14E, Porter Precinct. The bridge is composed of three spans: 2 steel stringer approaches (one located on each end of the main span), and one steel, five-panel, pinned Pratt through truss. A builder's plate on the northeast endpost reads: "Built by the Western Bridge & Construction Co., Omaha, Neb." Unfortunately, county records do not indicate that the Western Bridge and Construction Company was ever awarded a contract to build this span. In 1910, however, the county did build a 60-foot steel bridge over Whiskey Run between Section 23 and 24. The current span's wide roadway and pinned construction suggest that it must have been erected to replace the earlier 60-foot bridge sometime around 1915. Between 1910 and 1915, however, the county reportedly erected all of its own bridges. In all likelihood, the Western Bridge and Construction Company merely fabricated the current span, while it was erected by the county.

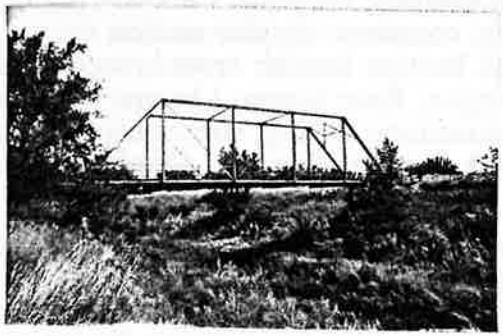
The Whiskey Run Bridge is typical of many through trusses built in Nebraska during the 1910s.

NAME(S) OF STRUCTURE
Whiskey Run Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C007432315; builder's plate on bridge; Proceedings of the Richardson County Commissioners, 1881-1935, located in Richardson County Courthouse, Falls City, Nebraska, see the following entries: 20 August 1909, volume 8, page 439; 6 January 1910, volume 8, page 467; field inspection by Jeffrey A. Hess, 19 July 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Nedrow's Bridge [Little Muddy Creek Bridge] RICH17
NDOR: C007441715

DATE(S) OF CONSTRUCTION
1912

LOCATION
county highway over Little Muddy Creek; S8/9, T3N, R14E
4.5 miles west, 0.5 mile north of Stella; Richardson County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 36)

CONDITION
good

OWNER
Richardson County

span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt pony truss
span length:	70.0'	substructure:	steel pile bent abutments and piers
total length:	100.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	19.5'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: 2 eyebars; verticals: 4 angles tied with lacing; diagonals: 2 eyebars; counters: circular-section eyerod with turnbuckle; floor beams: I-beams bolted to angles which are riveted to gussets; bottom lateral: cross-braced circular-section eyerods; railing: lattice

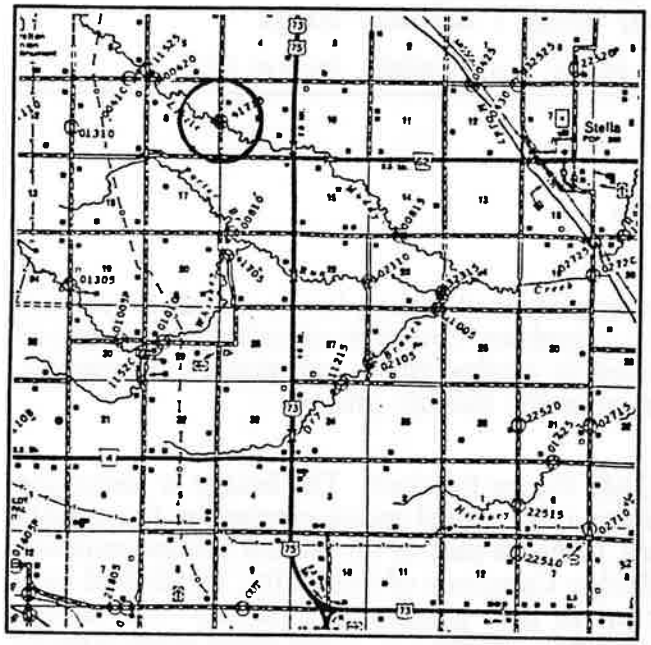
This bridge carries a county road over Little Muddy Creek between Sections 8 and 9, T3N, R14E, Porter Precinct. The bridge is composed of a four-panel, pinned Pratt pony with one steel stringer approach on the south. This was one of ten steel spans erected by the county in 1912. In the early 1900s, all of the steel bridges in the county were erected by contractors, often as part of an annual bridge contract. In 1906, however, the county board moved to reject the bridge bid of the John B. Gilligan Bridge Company of Falls City, which had won the annual contracts in most previous years, arguing that the contractors had fixed their prices in a pooling agreement. The Bridge Committee declared that "the bidders who were supposed to be competitors of the John Gilligan Bridge Co. were mere stool-pigeons imported here for no other purpose than to drag the game into the net..." The committee therefore declared that "the time has now come for the county to build there [sic] own bridges..., [and] recommend that... the County Board purchase material and erect at actual cost of labor all bridges required for the ensuing year." The decision proved controversial and unpopular, but the county was regularly building its own bridges by 1912. In that year, the board purchased materials for its bridges from both the Clinton Bridge and Iron Works and the Omaha Structural Steel Works. The bridge was probably built according to plans prepared by the county in 1903 and modified in 1904 and 1905. According to county records, work began on this steel bridge on 7 September 1912, and was finished by 12 September. The total cost was $1217.54. One other bridge (RICH07) has been identified as having been built in 1912, and is virtually identical with this structure. The other bridge was fabricated by the Clinton Bridge and Iron Works, suggesting that this bridge may have been as well.

Nedrow's Bridge is typical of many pony trusses built in Nebraska during the 1910s. It also illustrates early county efforts to rationalize its bridge building program.

NAME(S) OF STRUCTURE

Nedrow's Bridge [Little Muddy Creek Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C007441715; Proceedings of the Richardson County Commissioners, 1881-1935, located in Richardson County Courthouse, Falls City, Nebraska, see the following entries: 21 November 1912, volume 9, page 207; 9 January 1913, volume 9, page 218; Bridge Record, located in Richardson County Courthouse, see entry for bridge number 80, 1912; field inspection by Jeffrey A. Hess, 19 July 1989.

INVENTORIED BY

Demian Hess

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Muddy Creek Bridge
NDOR: C007442605

RICH18

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
county highway over Muddy Creek; S2/35, T1N/2N, R16E
0.5 mile north, 0.3 mile east of Falls City; Richardson County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 22)

CONDITION
good

OWNER
Richardson County

span number: 1
span length: 125.0'
total length: 179.0'
roadway wdt.: 15.0'

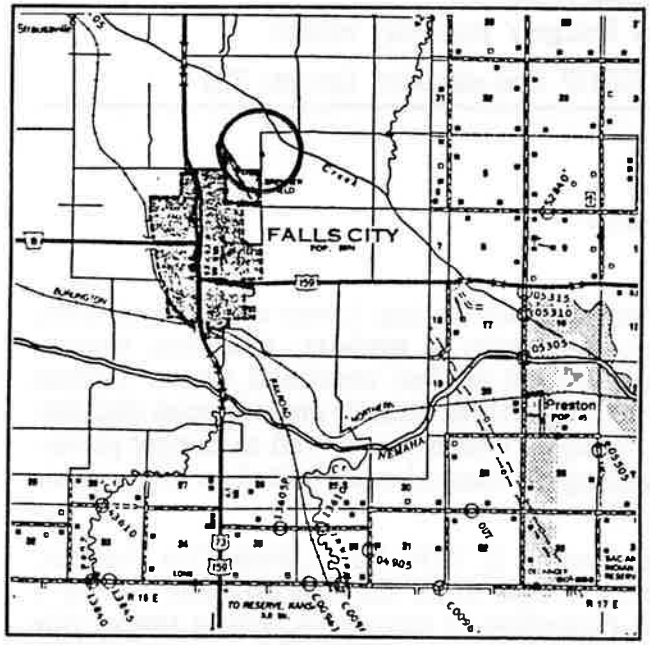
superstructure: steel, 7-panel, pin-connected Pratt through truss
substructure: steel pile abutments and piers
floor/decking: wood deck over I-beam stringers
other features: upper chord: back-to-back channels with cover plate and lacing; lower chord: 2 eyebars; verticals: back-to-back channels with lacing; diagonals: 2 eyebars; counters: square-section eyerod with turnbuckle; portals: back-to-back angles; overhead struts: T-beam composed of solid plate and riveted angles; top and bottom lateral: cross-braced circular-section eyerods; floor beams: I-beams bolted to angles which are riveted to hanger plates--hanger plate riveted to bottom of vertical; railing: 2 channel rails bolted to angle posts

This bridge carries a minimally improved county road over Muddy Creek on the line between Section 2, T1N, R16E, Falls City Precinct, and Section 35, T2N, R16E, Ohio Precinct. The bridge is composed of a pin-connected Pratt through truss, flanked on each side by a steel stringer approach span. The main span appears to be unaltered and has good integrity. According to county records, a timber pile bridge stood at this site as late as 1914. It is not known when the current structure was erected, but judging from its roadway width and pinned construction, it probably dates to ca.1915. In the 1920s, riveting became more prevalent, and most bridges had roadways of at least 16 feet.

The Muddy Creek Bridge is typical of many through trusses built in Nebraska during the 1910s.

NAME(S) OF STRUCTURE
Muddy Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C007442605; Proceedings of the Richardson County Commissioners, 1881-1935, located in Richardson County Courthouse, Falls City, Nebraska; County Bridge Record, entry for bridge number 242, 8 February 1914, located in Richardson County Courthouse; field inspection by Demian Hess, 11 March 1990.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Halfbreed Creek Bridge RICH19
NDOR: C007442610

DATE(S) OF CONSTRUCTION
ca.1925

LOCATION
county highway over Halfbreed Creek; S6/31, T1N/2N, R17E
1 mile north, 2.5 miles east of Falls City; Richardson County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 20)

CONDITION
good

OWNER
Richardson County

span number:	1	superstructure:	steel, 7-panel, rigid-connected Pratt through truss
span length:	120.0'	substructure:	welded steel pile abutments with timber backwall
total length:	121.0'	floor/decking:	wood deck over I-beam stringers
roadway wdt.:	15.8'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: back-to-back channels with top and bottom battens; verticals: back-to-back channels with lacing; diagonals: 2 angles with battens; portals: back-to-back angles; overhead struts: T-beam formed by solid plate and riveted angles; top and bottom lateral: cross-braced circular-section eyerods; floor beams: I-beams riveted to angles which are bolted and riveted to hanger plates--hanger plate bolted to bottom of vertical; railing: 2 channel rails bolted to channel posts

This bridge carries a minimally improved county road over Halfbreed Creek. It is located on the line between Section 6, T1N, R17E, Jefferson Precinct, and Section 31, T2N, R17E, Ohio Precinct. The bridge is a single-span, seven-panel, rigid-connected Pratt through truss. Although missing a section of railing, the structure is largely unaltered and possesses good integrity. County records do not provide a construction date, but judging from its roadway width of 15.8 feet and bolted construction, it was probably erected ca.1925.

The Halfbreed Creek Bridge is typical of many through trusses built in Nebraska during the 1920s.

NAME(S) OF STRUCTURE
Halfbreed Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION

LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C007442610; Proceedings of the Richardson County Commissioners, 1881-1935, located in Richardson County Courthouse, Falls City, Nebraska; field inspection by Demian Hess, 11 March 1990.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Winnebago Creek Bridge
NDOR: C007472425

RICH20

DATE(S) OF CONSTRUCTION
ca.1905

LOCATION
county highway over Winnebago Creek; S30/31, T2N, R18E
3 miles north of Rulo; Richardson County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / private bridge

RATING NRHP non-eligible (score: 20)

CONDITION
good

OWNER
private

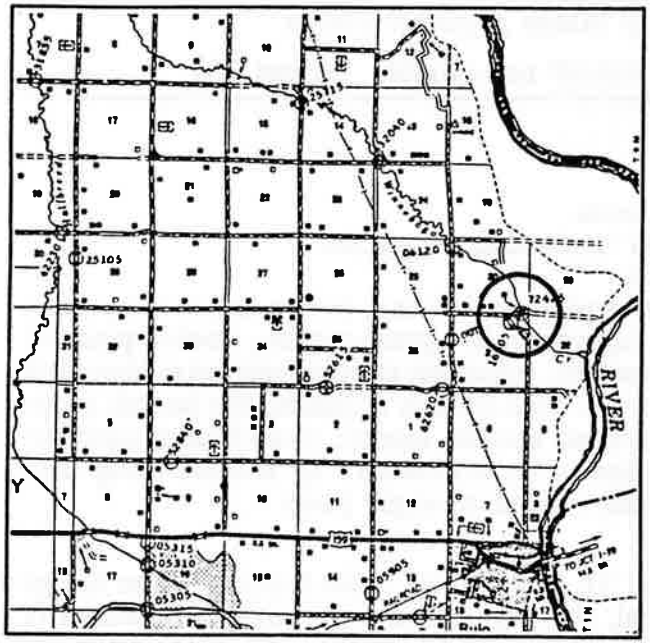
span number:	1	superstructure:	steel, 6-panel, pin-connected Pratt through truss
span length:	100.0'	substructure:	bolted steel pile bent abutments with timber back- and wingwalls
total length:	100.0'	floor/decking:	single-layer wood deck over I-beam stringers
roadway wdt.:	15.6'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: 2 eyebars; verticals: back-to-back channels with lacing; hip verticals: square-section, double-pronged looped eyebars; diagonals: 2 square-section eyebars; counters: circular-section eyebar with turnbuckle; portals: single angles; overhead struts: back-to-back channels; top lateral: cross-braced circular section eyerods with turnbuckles; bottom lateral: cross-braced circular-section eyerods; floor beams: I-beams fastened to superstructure by U-bolts hung over lower pin connections; railing: 2 channel rails welded to angle posts

This bridge carries a private road over Winnebago Creek on the line between Sections 30 and 31, T2N, R18E, Rulo Precinct. The bridge is a single-span, six-panel, pin-connected Pratt through truss. While the truss is fairly typical, the hip-verticals are unusual. Instead of terminating in a single-loop to fit over the lower pin-connection, the bottom of the hip vertical splits into two prongs, each of which has been forged into a loop. The loops fit over the lower pin, with the U-bolt sandwiched between. This configuration reportedly dates to the early 1900s, suggesting that this bridge was constructed ca.1905. This type of hip-vertical configuration was widely used by both the Wrought Iron Bridge Company from about 1890 to 1905, but county records do not make any reference to this firm during this time period. It is possible that the bridge was originally constructed in another county, and later moved to this site.

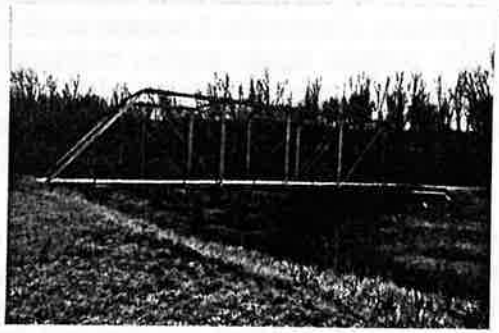
The Winnebago Creek Bridge exemplifies an unusual construction technique, but its lack of documentation limits its interpretive value.

NAME(S) OF STRUCTURE
Winnebago Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C007472425; Proceedings of the Richardson County Commissioners, 1881-1935, located in Richardson County Courthouse, Falls City, Nebraska; field inspection by Demian Hess, 11 March 1990.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Rulo Viaduct RICH21
NDOR: S159 01306

DATE(S) OF CONSTRUCTION
1940

LOCATION
U.S. Highway 159 over Burlington Northern Railroad; S18, T1N, R18E
Rulo; Richardson County, Nebraska

USE (ORIGINAL / CURRENT)
highway overpass / highway overpass

RATING NRHP non-eligible (score: 36)

CONDITION
good

OWNER
Nebraska Department of Roads

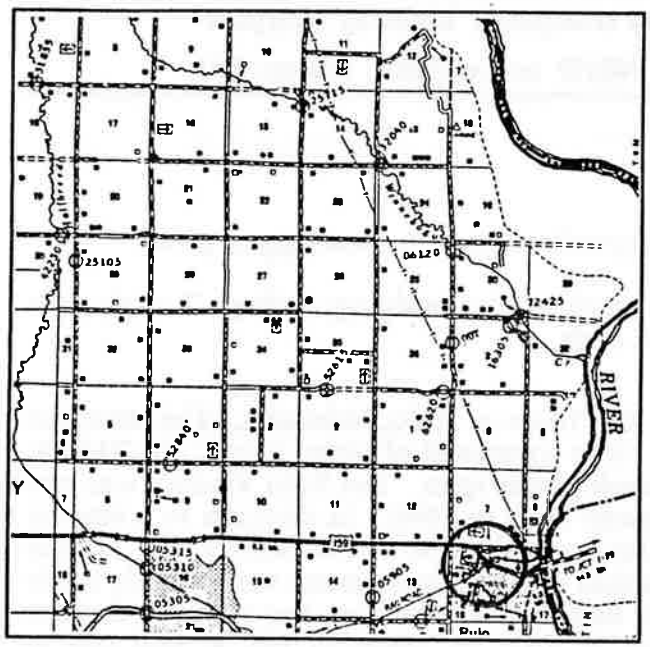
span number:	7	superstructure:	steel deck girder
span length:	62.0'	substructure:	concrete abutments with flared concrete wingwalls; concrete, two-legged piers
total length:	178.0'	floor/decking:	concrete deck
roadway wdt.:	26.0'	other features:	superstructure: 7 steel deck girders with channel section bridging; railing: 2 angle rails on angle posts bolted to outside of concrete curb

The Rulo Viaduct carries U.S. Highway 159 over the Burlington Northern Railroad tracks in the Town of Rulo, Nebraska. The structure is built on a 29 degree skew and is supported by concrete abutments and two-legged piers. It is composed of seven spans: six 20-foot, steel, deck girder approaches (three on each side of the main span), and one 62-foot, steel, deck girder span. The Rulo Viaduct was one in a series of improvements being made to State Highway Number 4 (now part of U.S. Highway 159) in 1940. In addition to a viaduct at Rulo over what were then the tracks of the Chicago, Burlington and Quincy Railroad, the state planned to reconstruct and surface several sections of the highway, including the section between Rulo and Falls City. It appears that these improvements were largely made in anticipation of a new bridge being constructed over the Missouri River at Rulo (RICH22), less than a mile from the planned viaduct. The district engineer reported: "Two bridges have been built over the Missouri River; one at Rulo on Highway No. 4, and one at Brownville on Highway No. 3... As a result of their construction, there will be an increase of traffic on the highways leading to these structures." The new viaduct, as well as the other improvements to Highway Number 4, were undoubtedly intended to facilitate the expected increase. The state highway department prepared plans for the new viaduct in December 1939. The plans specified that the approach spans were to be constructed with salvaged I-beams from the old "L" Street viaduct in Omaha, which was being rebuilt at that time. Work on the Rulo Viaduct began sometime after April, when T.F. Marbut of Emporia, Kansas, won the construction contract. The St. Joseph Structural Steel Works of St. Joseph, Missouri, fabricated the superstructure. The viaduct was completed by the end of the year at a total cost of $18,647.20. The structure appears to be unaltered and has good integrity.

This structure is typical of grade separations built in Nebraska during the 1940s.

NAME(S) OF STRUCTURE
Rulo Viaduct

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number S159 01306; **Twenty-Third Biennial Report of the Department of Roads and Irrigation, Part 1, Report of the Bureau of Roads and Bridges**, 1939-1940, located in the Nebraska Department of Roads, Lincoln, Nebraska, see pages 23, 27-28, 152; State of Nebraska, "Rulo Viaduct," 1939, revised 1940, plan number 447(3)-1, located in Bridge Division, Nebraska Department of Roads; State of Nebraska, Shop Plans for Rulo Viaduct, 1940, shop plan number 9217, located in Bridge Division, Nebraska Department of Roads; field inspection by Demian Hess, 11 March 1990.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Rulo Bridge [Missouri River Bridge] RICH22
NDOR: S159 01373

DATE(S) OF CONSTRUCTION
1938/1939

LOCATION
U.S. Highway 159 over the Missouri River; S17, T1N, R18E
east edge of Rulo; Richardson County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP eligible (score: 65)

CONDITION
good

OWNER
Nebraska Department of Roads

span number: 3
span length: 375.0'
total length: 859.0'
roadway wdt.: 20.0'

superstructure: steel, 16-panel riveted Pennsylvania through truss with riveted Warren deck trusses
substructure: concrete abutments and wingwalls; concrete two-legged piers and solid channel piers
floor/decking: concrete deck over I-beam transverse joists which rest on I-beam stringers
other features: upper chord: back-to-back channels with cover plate and double lacing; lower chord: face-to-face channels with top and bottom battens; verticals: built-up I-beams to level of longitudinal, horizontal bracing, above are composed over 4 angles tied by lacing; hip verticals: built-up I-beams; diagonals: face-to-face channels with lacing, diagonals tying second lower panel point from end to top of hip is built-up I-beam; portals: intermediate transverse strut and diagonal bracing below are composed of 4 angles tied with lacing, all other members consist of 2 angles tied with lacing; sway bracing: overhead struts composed of 4 angles tied with lacing, all other members are single angle sections; top lateral: cross-braced members composed of 2 angles tied by lacing; floor beams: I-beams riveted by means of gussets to lower chord; bottom lateral: cross-braced members composed of back-to-back angles; railing: channel and angle-section rails riveted to double angle-section posts

The Rulo Bridge carries U.S. Highway 159 over the Missouri River at Rulo, Nebraska. The bridge is located on the Nebraska/Missouri line, at the east edge of Section 17, T1N, T18E, Rulo Precinct. The structure has a total length of approximately 859 feet, and is composed of 10 steel, riveted, Warren deck truss approaches (5 on each end of the bridge), and 3 steel, 8-panel, riveted, Pennsylvania through trusses. Each through truss is approximately 375 feet in length, with a clear roadway width of 20 feet and an overhead clearance of approximately 16 feet.

A group led by John C. Mullen of Falls City laid the ground work for the Rulo Bridge in 1933, when it secured permission from the United States Congress to construct and operate a toll bridge over the Missouri River at Rulo. Either in that year or earlier, the group also engaged the services of the Kansas City engineering firm of Harrington and Cortelyou to prepare plans for the bridge. The initial plans were approved by the War Department on 29 May 1933. Despite these efforts, it is not known whether Mullen and his associates ever intended to construct the bridge. On 14 February 1934, Mullen approached the Richardson County Board, offering to assign the county "all his rights, interests, contracts, and franchises which he possesses for the construction of a vehicular traffic bridge at Rulo."

The county accepted Mullen's offer, but only on the condition that it not have to pay for construction. Considering that the bridge was estimated to cost between $700,000 and $800,000, this was no small caveat. Fortunately, Mullen had a solution, proposing that the county apply for a federal grant and loan. The board was careful to stipulate that the loan would only be repaid through bridge tolls, at no expense to the county. The county clerk noted in his minutes:

> **It was explained that [Richardson County could]... obtain a grant from the Reconstruction Finance Corporation of the Federal Government to build such bridge, in the amount of about $800,000, of which thirty percent of the portion thereof that is expended for labor and material would... be an outright gift, the balance to be repaid with interest at the rate of four percent per annum . . . . It being the understanding that the Reconstruction Finance Corporation would approve the issuing of such bonds as debenture bonds only, the same to be retired from revenue from the use of such bridge so that the County of Richardson would not be subject to any deficiency judgement in the case that such bridge does not pay out...**

Negotiations appear to have dragged on for several years, but in September 1938, the Public Works Administration agreed to fund 45 percent of the bridge's construction, the total grant not to exceed $326,250. To cover the balance, the county released a bond issue which was to be repaid through bridge revenue. With funding secured, the board officially entered a contract with Harrington and Cortelyou, who had been operating under a verbal agreement. The firm was to prepare all plans and supervise the project for six percent of the cost of construction. On 7 October, the board called for construction bids. The announcement stipulated that no bid was to exceed $625,000, and stated that "the structure comprises, from west to east, 815 ft. of graded approach, five steel deck truss spans, each 100 ft. long, three steel through truss spans, each 376.5 ft. long, 5 steel deck truss spans, each 100 ft. long and 352 ft. of graded approach. A concrete floor slab is provided on all the truss spans and concrete paving on the graded approaches."

The county opened bids on 7 November 1938. Of eleven bids received, the board selected the joint proposal of the Kansas City Bridge Company and the Missouri Valley Bridge and Iron Company, low bidders at $599,425.35. In an effort to provide local employment during the Depression, the county required the contractors to hire Richardson County residents whenever possible. Construction apparently began immediately and continued through 1939. The Empire Construction Company of Omaha was subcontracted to grade the approaches, and the Interstate Construction Company of Lincoln installed the bridge lighting. The Rulo Bridge apparently opened to traffic in November 1939, and the Richardson County Board officially accepted the toll bridge on 2 April 1940. The total cost of construction amounted to $651,296.01.

In 1945, an engineer from the Nebraska highway department observed that "the steel portions of the structure appear in excellent condition, although due to war conditions, the painting of the steel has been deferred and the paint coat is not in as good a condition as desired. This, no doubt, will be remedied when materials and labor again become available." More seriously, the writer also reported that the west approach fill had settled, and "this has occasioned some movement in the abutment and in the truss span at the west end of the bridge. This movement is sufficient to entirely close the expansion joint between the trusses at the first pier." The engineer presumably was referring to the first approach span, and not the westernmost through truss. The state estimated the cost of the repairs at $10,000, and the work was probably done in the late 1940s. Aside from these minor repairs, no major work appears to have been performed on the bridge after its opening.

In October 1966, Richardson County informed the States of Nebraska and Missouri that "there appears at this time [to be] . . . sufficient funds available for a premature retirement of the [bridge construction] bonds on or before October 1, 1967." Although tolls would no longer be required to repay the bridge bonds, they would still be collected to cover the cost of maintenance. Noting that Interstate 29 was currently being built in Missouri and that an access road was planned from the bridge, the board urged the states to assume ownership and make the Rulo Bridge a toll-free crossing to facilitate travel. The board stated: "It would be beneficial to the residents of Richardson County, Nebraska, and to the residents of Northwest Missouri that the bridge be made a free bridge. . . . This is particularly true in light of the construction of Highway I 29 through Holt County, Missouri, and the proposed plans to build an access road from I 29 to the Rulo Bridge."

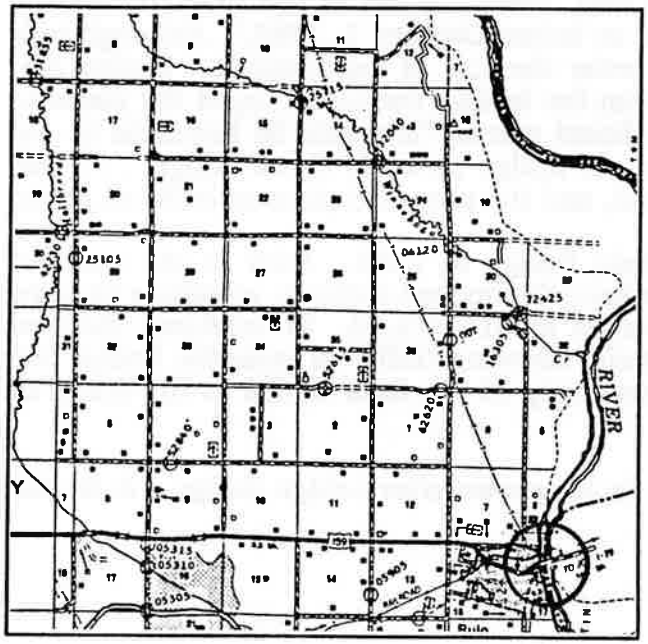
The States of Nebraska and Missouri agreed to assume joint ownership of the Rulo Bridge in 1969. Prior to the transfer, Richardson County contracted with the Capital Bridge Company to repair and waterproof the bridge's concrete surfaces, according to plans and specifications prepared by the State of Nebraska. The total cost of the project amounted to $14,775.00. To celebrate the new ownership, the county board declared 15 May and 19 June as "free bridge" days, temporarily allowing traffic to cross the bridge free of toll. On 24 June 1969, the Richardson County Board signed the papers transferring ownership of the Rulo Bridge to the States of Nebraska and Missouri.

A regionally important crossing of the Missouri River, the Rulo Bridge is significant for its long-span river bridge design. It is also significant for its association with the firm of Harrington and Cortelyou.

NAME(S) OF STRUCTURE

Rulo Bridge [Missouri River Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number S159 01373; Nebraska Department of Roads and Irrigation, **Twenty-Third Biennial Report**, 1939-40, p. 23; Henry G. Schlitt, "Missouri River Bridges, Report #2," 7 November 1945, located in Bridge Division, Nebraska Department of Roads, Lincoln, Nebraska; Proceeding of the Richardson County Commissioners, located in Richardson County Courthouse, Falls City, Nebraska, see the following entries indexed in the "Rulo Bridge Book", Book 13 : 14 February 1934 (pp. 673-674); Book 14: 10 September 1935 (p. 276), 24 September 1935 (pp. 284-5), 23 June 1936 (p. 419), 29 June 1938 (pp. 52-53); Book 15: 28 July 1938 (pp. 67-70), 13 September 1938 (pp. 111-113), 29 November 1938 (p. 161), 17 January 1939 (p. 183), 25 July 1939 (p. 239), 7 November 1939 (p. 276), 2 April 1940 (p. 324); Book 16: 11 October 1966 (p. 73); Book 20: 17 January 1967 (p. 106), 10 December 1968 (p. 363) 7 January 1969 (p. 371), 25 February 1969 (p. 389), 24 June 1969 (p. 426).

INVENTORIED BY

Demian Hess

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge RICH23
NDOR: none

DATE(S) OF CONSTRUCTION
1938-1940

LOCATION
County Highway Number 22 over stream; S19/30, T2N, R14E
1 mile south, 2.7 miles west of Dawson; Richardson County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 25)

CONDITION
good

OWNER
Richardson County

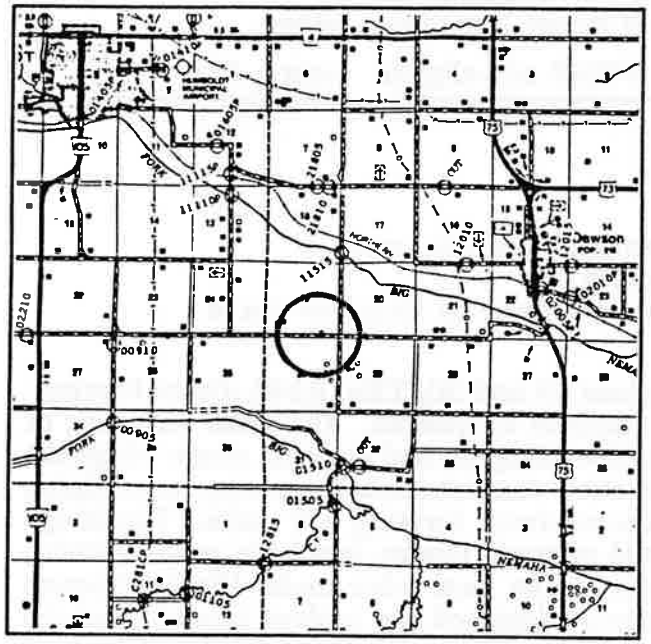
span number:	1	superstructure:	steel stringer with concrete beams
span length:	approx. 12'	substructure:	concrete abutments with stone, stepped, perpendicular wingwalls
total length:	approx. 35'	floor/decking:	concrete slab over stringers, covered with earth fill
roadway wdt.:	approx. 30'	other features:	stone retaining walls to hold fill, rising above roadway to form low curbs

This bridge carries a county road over a small creek, and is located on the line between Sections 19 and 30, T2N, R14E, Grant Precinct, in the northeast 1/4 of Section 19. The structure is a single-span, steel stringer bridge on concrete abutments. The outer stringers, or lintels, are actually concrete beams with riveted steel, bottom plates. A concrete slab overlies the stringers, and stepped, stone wingwalls extend perpendicularly from the abutments. On either elevation, stone walls rise from the outer concrete beams, serving as retaining walls for approximately four feet of roadway fill. The walls extend a short distance above the roadway, forming low curbs. The bridge is similar to several stone arch culverts located in the county. These culverts are constructed of stone blocks, and have perpendicular, stepped, stone wingwalls. The culverts were reportedly built sometime between 1938 and 1940 by local labor under Works Progress Administration funding. Ben Dale, the County Highway Superintendent at that time, apparently designed the bridges himself, and the stone was locally quarried. This steel stringer was probably constructed as part of Dale's road program, and is the only one of its kind known to still exist in the county. Aside from concrete wingwall extensions, which all of the stone culverts also exhibit, the bridge is unaltered and has good integrity.

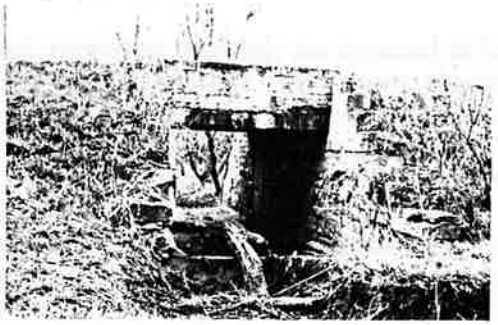
This structure is a fine example of WPA bridge construction in Nebraska.

NAME(S) OF STRUCTURE
Culvert

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Demian Hess, personal interview with Dale King, local resident, 13 March 1990; Demian Hess, personal interview with Roger Lee, county bridge foreman, 12 March 1990; field inspection by Demian Hess, 13 March 1990.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Culvert RICH24
NDOR: none

DATE(S) OF CONSTRUCTION
1938-1940

LOCATION
County Road 22 over unnamed stream; S21, T2N, R14E
1 mile south, 0.5 mile west of Dawson; Richardson County, Nebraska

USE (ORIGINAL / CURRENT)
roadway culvert / roadway culvert

RATING NRHP non-eligible (score: 25)

CONDITION
good

OWNER
Richardson County

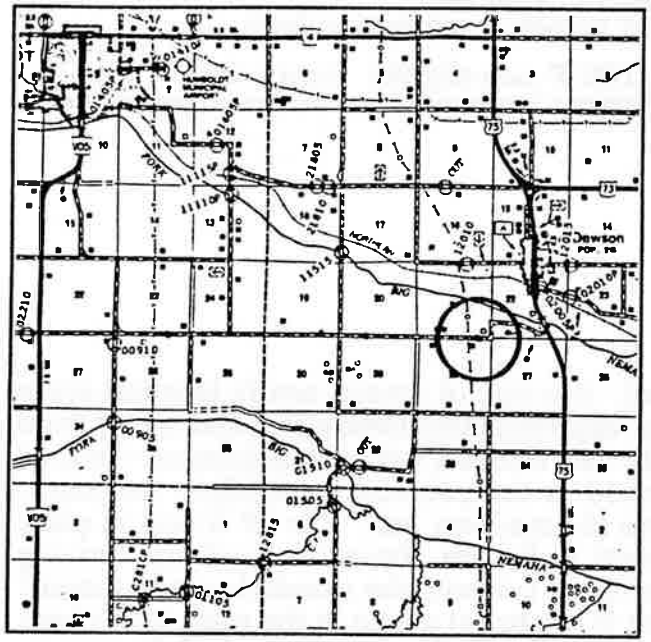
span number:	1	superstructure:	stone arch culvert
span length:	approx. 12'	substructure:	stone
total length:	approx. 35'	floor/decking:	gravel over earth fill
roadway wdt.:	approx. 30'	other features:	none

This culvert is located at the corner of a sharp north-south bend in an east-west county road. It is one of several nearly identical stone culverts constructed in Richardson County. These single stone arch structures have spans of approximately twelve feet and spring from stone footings, approximately three feet above grade. The vault is constructed of individually set, coursed, ashlar, bushhammer finished stone. All joints are very tight and have been pointed with cement. Lines have been traced in the pointing to highlight the joints. Rather than stone abutments, earth fill resists the outward thrust of the stone arch and forms the roadway bed. The fill is held in place by stone spandrel walls rising on either elevation. In this particular structure, the spandrel walls rise above the roadway, forming parapets. In some of the other culverts, the spandrels merely serve as headwalls. In most of these culverts, the spandrels are buttressed by perpendicular, stepped, stone wingwalls set on either side of the arch. Since this structure is located at a turn in the road, it has been built at an extreme skew of approximately 45 degrees. As a result, the wingwalls are aligned with the north-south channel of the stream, and are set approximately 45 degrees to the spandrel walls. Dale King, a resident of Humboldt Precinct who lives adjacent to one of these stone culverts, reports that they were all constructed sometime between 1938 and 1940 under Works Progress Administration funding. According to Mr. King, the culverts were probably designed by Ben Dale, the county highway superintendent at that time. County work forces constructed the structures, and the stone came from local quarries. Mr. King reports that one of the old quarries is located in Section 25, T2N, R13E, and that it also provided the stone for the Falls City Auditorium. This particular culvert is unaltered and has good integrity.

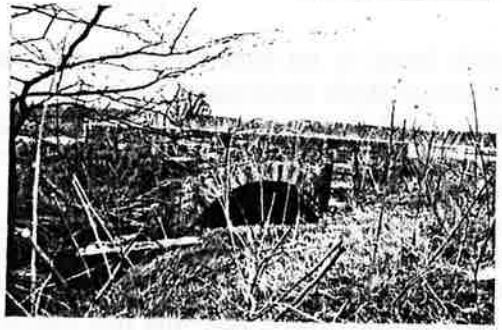
This structure is a fine example of WPA stone arch culvert construction in Nebraska.

NAME(S) OF STRUCTURE
Culvert

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Demian Hess, personal interview with Dale King, local resident, 13 March 1990; Demian Hess, personal interview with Roger Lee, county bridge foreman, 12 March 1990; field inspection by Demian Hess, 13 March 1990.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Culvert RICH25
NDOR: none

DATE(S) OF CONSTRUCTION
1938-1940

LOCATION
County Road 22 over unnamed stream; S20/29, T2N, R14E
1 mile south, 2 miles west of Dawson; Richardson County, Nebraska

USE (ORIGINAL / CURRENT)
roadway culvert / roadway culvert

RATING NRHP non-eligible (score: 25)

CONDITION
good

OWNER
Richardson County

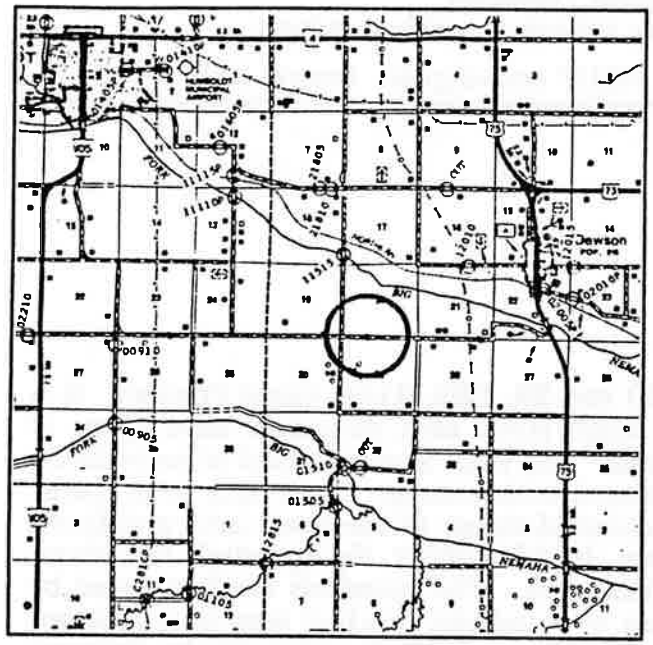
span number:	1	superstructure:	stone arch culvert
span length:	approx. 12'	substructure:	stone
total length:	approx. 35'	floor/decking:	gravel over earth fill
roadway wdt.:	approx. 30'	other features:	none

This stone culvert carries a county road over a small stream on the line between Sections 20 and 29, T2N, R14E, Grant Precinct. It is one of several nearly identical stone culverts constructed in Richardson County. These single stone arch structures have spans of approximately twelve feet and spring from stone footings, approximately three feet above grade. The vault is constructed of individually set, coursed, ashlar, bushhammer finished stone. All joints are very tight and have been pointed with cement. Lines have been traced in the pointing to highlight the joints. Rather than stone abutments, earth fill resists the outward thrust of the stone arch and forms the roadway bed. The fill is held in place by stone spandrel walls rising on either elevation. In this culvert, the spandrels rise above the roadway, forming low curbs. In some other culverts, the spandrels merely serve as headwalls. The spandrels are buttressed by perpendicular, stepped, stone wingwalls set on either side of the arch. Dale King, a resident of Humboldt Precinct who lives adjacent to one of these stone culverts, reports that they were all constructed sometime between 1938 and 1940 under Works Progress Administration funding. According to Mr. King, the culverts were probably designed by Ben Dale, the county highway superintendent at that time. County work forces constructed the structures, and the stone came from local quarries. Mr. King reports that one of the old quarries is located in Section 25, T2N, R13E, and that it also provided the stone for the Falls City Auditorium. This culvert is unaltered and has good integrity.

This is a fine example of WPA stone arch culvert construction in Nebraska.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Demian Hess, personal interview with Dale King, local resident, 13 March 1990; Demian Hess, personal interview with Roger Lee, county bridge foreman, 12 March 1990; field inspection by Demian Hess, 13 March 1990.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Culvert RICH26
NDOR: none

DATE(S) OF CONSTRUCTION
1938-1940

LOCATION
County Road 22 over unnamed stream; S23/26, T2N, R13E
3 miles south, 0.8 mile east of Humboldt; Richardson County, Nebraska

USE (ORIGINAL / CURRENT)
roadway culvert / roadway culvert

RATING NRHP non-eligible (score: 25)

CONDITION
good

OWNER
Richardson County

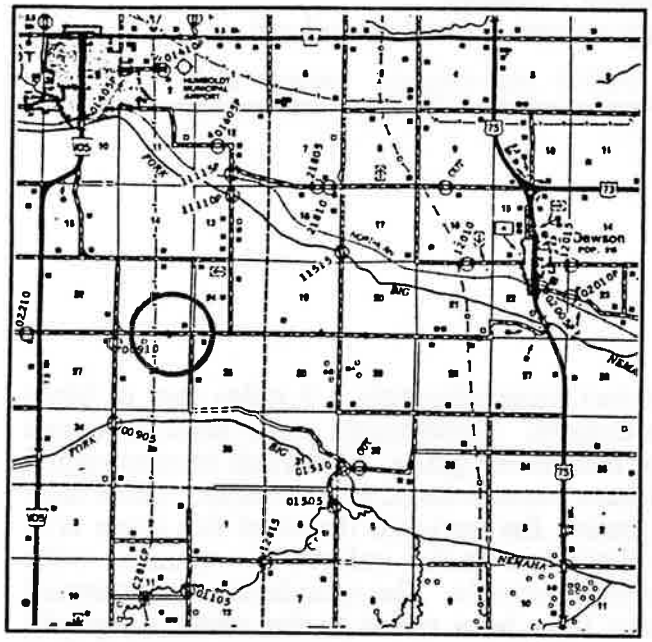
span number:	1	superstructure:	stone arch culvert
span length:	approx. 12'	substructure:	stone
total length:	approx. 35'	floor/decking:	gravel over earth fill
roadway wdt.:	approx. 30'	other features:	none

This culvert is located on the line between Sections 23 and 26, T2N, R13E, Humboldt Precinct, approximately 1.3 miles east of State Highway 105. It is one of several nearly identical stone culverts constructed in Richardson County. These single stone arch structures have spans of approximately twelve feet and spring from stone footings, approximately three feet above grade. The vault is constructed of individually set, coursed, ashlar, bushhammer finished stone. All joints are very tight and have been pointed with cement. Lines have been traced in the pointing to highlight the joints. Rather than stone abutments, earth fill resists the outward thrust of the stone arch and forms the roadway bed. The fill is held in place by stone spandrel walls rising on either elevation. In this culvert, the spandrel walls rise above the roadway, forming low parapets. In other culverts, the spandrels merely serve as headwalls. The spandrels are buttressed by perpendicular, stepped, stone wingwalls set on either side of the arch. Concrete extensions have been added to the south wingwalls in this particular culvert. Dale King, a resident of Humboldt Precinct who lives adjacent to one of these stone culverts, reports that they were all constructed sometime between 1938 and 1940 under Works Progress Administration funding. According to Mr. King, the culverts were probably designed by Ben Dale, the county highway superintendent at that time. County work forces constructed the structures, and the stone came from local quarries. Mr. King reports that one of the old quarries is located in Section 25, T2N, R13E, and that it also provided the stone for the Falls City Auditorium. This culvert is unaltered and has good integrity.

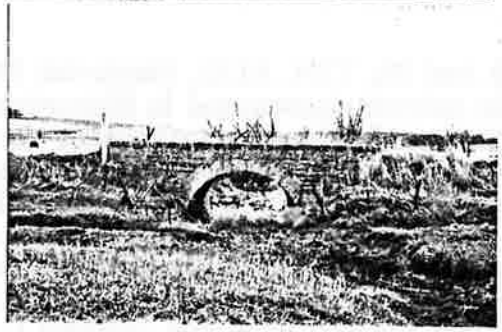
This is a fine example of WPA stone arch culvert construction in Nebraska.

NAME(S) OF STRUCTURE
Culvert

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Demian Hess, personal interview with Dale King, local resident, 13 March 1990; Demian Hess, personal interview with Roger Lee, county bridge foreman, 12 March 1990; field inspection by Demian Hess, 13 March 1990.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Culvert RICH27
NDOR: none

DATE(S) OF CONSTRUCTION
1938-1940

LOCATION
county highway over unnamed stream; S9/10, T1N, R17E
4 miles east, 0.5 mile south of Falls City; Richardson County, Nebraska

USE (ORIGINAL / CURRENT)
roadway culvert / roadway culvert

RATING NRHP non-eligible (score: 25)

CONDITION
good

OWNER
Richardson County

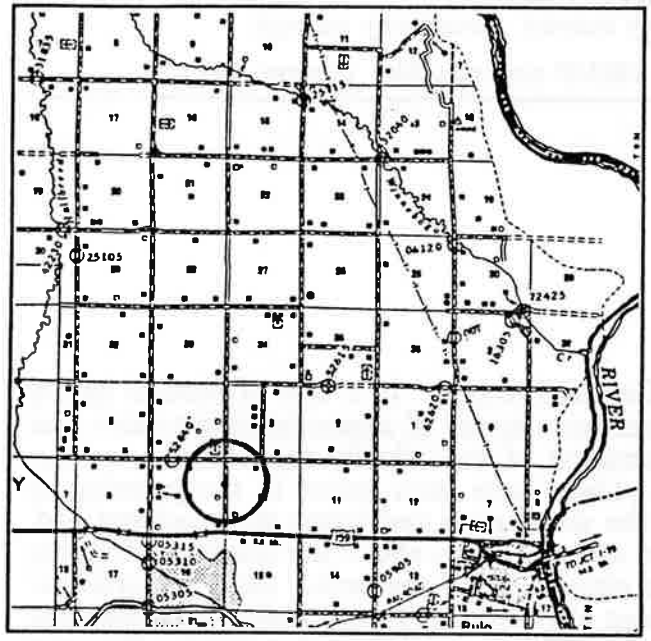
span number:	1	superstructure:	stone arch culvert
span length:	approx. 12'	substructure:	stone
total length:	approx. 35'	floor/decking:	gravel over earth fill
roadway wdt.:	approx. 30'	other features:	none

This culvert is located on a north-south road between Sections 9 and 10, T1N, R17E, Jefferson Precinct. It is one of several nearly identical stone culverts constructed in Richardson County. These single stone arch structures have spans of approximately twelve feet and spring from stone footings, approximately three feet above grade. The vault is constructed of individually set, coursed, ashlar, bushhammer finished stone. All joints are very tight and have been pointed with cement. Lines have been traced in the pointing to highlight the joints. Rather than stone abutments, earth fill resists the outward thrust of the stone arch and forms the roadway bed. The fill is held in place by stone spandrel walls rising on either elevation. The east elevation spandrel rises above the roadway, forming a parapet. The spandrels are buttressed by perpendicular, stepped, stone wingwalls set on either side of the arch. On this particular culvert, concrete extensions have been added to the west side wingwalls. Dale King, a resident of Humboldt Precinct who lives adjacent to one of these stone culverts, reports that they were all constructed sometime between 1938 and 1940 under Works Progress Administration funding. According to Mr. King, the culverts were probably designed by Ben Dale, the county highway superintendent at that time. County work forces constructed the structures, and the stone came from local quarries. Mr. King reports that one of the old quarries is located in Section 25, T2N, R13E, and that it also provided the stone for the Falls City Auditorium. This culvert is largely unaltered and has good integrity.

This is a fine example of WPA stone arch culvert construction in Nebraska.

NAME(S) OF STRUCTURE
Culvert

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
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INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Culvert
NDOR: none

RICH28

DATE(S) OF CONSTRUCTION
1938-1940

LOCATION
unimproved county road over unnamed stream; S21, T1N, R17E
southeast corner of Preston; Richardson County, Nebraska

USE (ORIGINAL / CURRENT)
roadway culvert / roadway culvert

RATING NRHP non-eligible (score: 21)

CONDITION
poor

OWNER
Richardson County

span number:	1	superstructure:	stone arch culvert
span length:	approx. 12'	substructure:	stone
total length:	approx. 35'	floor/decking:	gravel over earth fill
roadway wdt.:	approx. 30'	other features:	none

This culvert carries a north-south, unimproved, quarter-section line road in the southwest quarter of Section 21, T1N, R17E, Jefferson Precinct. It is one of several nearly identical stone culverts constructed in Richardson County. These single stone arch structures have spans of approximately twelve feet and spring from stone footings, approximately three feet above grade. The vault is constructed of individually set, coursed, ashlar, bushhammer finished stone. All of joints are very tight and have been pointed with cement. Lines have been traced in the pointing to highlight the joints. Rather than stone abutments, earth fill resists the outward thrust of the stone arch and forms the roadway bed. The fill is held in place by stone spandrel walls rising on either elevation. On the west side, the spandrel rises above the roadway to form a parapet. On the east, the entire spandrel, wingwall, and outer edge of the arch have collapsed. The west side spandrel is still buttressed by a perpendicular, stepped, stone wingwalls set on either side of the arch. Dale King, a resident of Humboldt Precinct who lives adjacent to one of these stone culverts, reports that they were all constructed sometime between 1938 and 1940 under Works Progress Administration funding. According to Mr. King, the culverts were probably designed by Ben Dale, the county highway superintendent at that time. County work forces constructed the structures, and the stone came from local quarries. Mr. King reports that one of the old quarries is located in Section 25, T2N, R13E, and that it also provided the stone for the Falls City Auditorium. Due to the collapse of the east elevation, the culvert has poor integrity.

This structure is an example of WPA stone arch culvert construction in Nebraska. Unfortunately, due deterioration, the culvert has lost integrity and is not eligible for nomination to the National Register.

NAME(S) OF STRUCTURE
Culvert

PHOTOS AND SKETCH MAP OF LOCATION

LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Demian Hess, personal interview with Dale King, local resident, 13 March 1990; Demian Hess, personal interview with Roger Lee, county bridge foreman, 12 March 1990; field inspection by Demian Hess, 13 March 1990.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Culvert
NDOR: none

RICH29

DATE(S) OF CONSTRUCTION
1938-1940

LOCATION
county highway over stream; S21/28, T1N, R17E
0.5 mile south of Prescott; Richardson County, Nebraska

USE (ORIGINAL / CURRENT)
roadway culvert / roadway culvert

RATING NRHP non-eligible (score: 21)

CONDITION
poor

OWNER
Richardson County

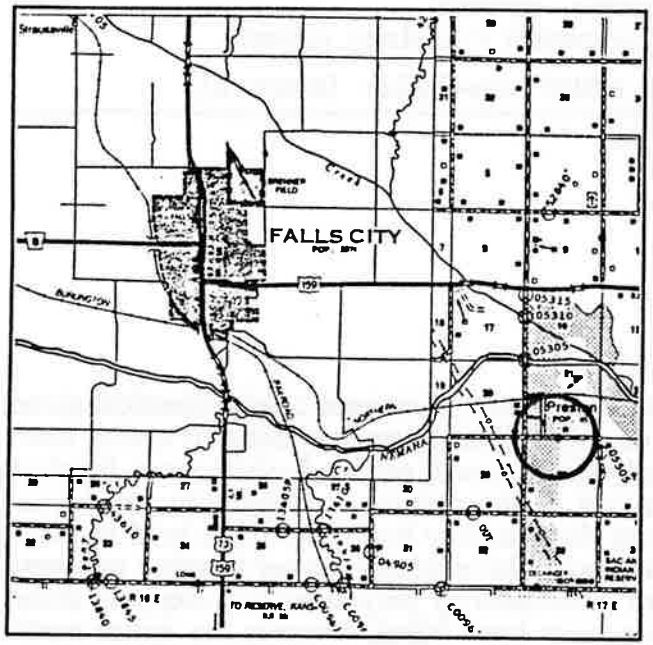
span number:	1	superstructure:	stone arch culvert
span length:	approx. 12'	substructure:	stone
total length:	approx. 35'	floor/decking:	gravel over earth fill
roadway wdt.:	approx. 30'	other features:	none

This culvert is located on the line between Sections 21 and 28, T1N, R17E, Jefferson Precinct. It is one of several nearly identical stone culverts constructed in Richardson County. These single stone arch structures have spans of approximately twelve feet and spring from stone footings, approximately three feet above grade. The vault is constructed of individually set, coursed, ashlar, bushhammer finished stone. All joints are very tight and have been pointed with cement. Lines have been traced in the pointing to highlight the joints. Rather than stone abutments, earth fill resists the outward thrust of the stone arch and forms the roadway bed. The fill is held in place by stone spandrel walls rising on either elevation. In some structures, the spandrel walls rise above the roadway, either forming parapets or low curbs. In other culverts, the spandrels merely serve as headwalls. The spandrels are buttressed by perpendicular, stepped, stone wingwalls set on either side of the arch. In this particular culvert, the north side buttresses must have failed, because the entire north elevation has collapsed. Dale King, a resident of Humboldt Precinct who lives adjacent to one of these stone culverts, reports that they were all constructed sometime between 1938 and 1940 under Works Progress Administration funding. According to Mr. King, the culverts were probably designed by Ben Dale, the county highway superintendent at that time. County work forces constructed the structures, and the stone came from local quarries. Mr. King reports that one of the old quarries is located in Section 25, T2N, R13E, and that it also provided the stone for the Falls City Auditorium. Due to the collapse of the north elevation, the culvert has poor integrity.

This structure is an example of WPA stone arch culvert construction in Nebraska. Unfortunately, due to deterioration, it has lost integrity and is not eligible for the National Register.

NAME(S) OF STRUCTURE
Culvert

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Demian Hess, personal interview with Dale King, local resident, 13 March 1990; Demian Hess, personal interview with Roger Lee, county bridge foreman, 12 March 1990; field inspection by Demian Hess, 13 March 1990.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Culvert RICH30
NDOR: none

DATE(S) OF CONSTRUCTION
1938-1940

LOCATION
county highway over unnamed stream; S23/26, T2N, R15E
2 miles south, 0.5 mile east of Verdon; Richardson County, Nebraska

USE (ORIGINAL / CURRENT)
roadway culvert / roadway culvert

RATING NRHP non-eligible (score: 23)

CONDITION
good

OWNER
Richardson County

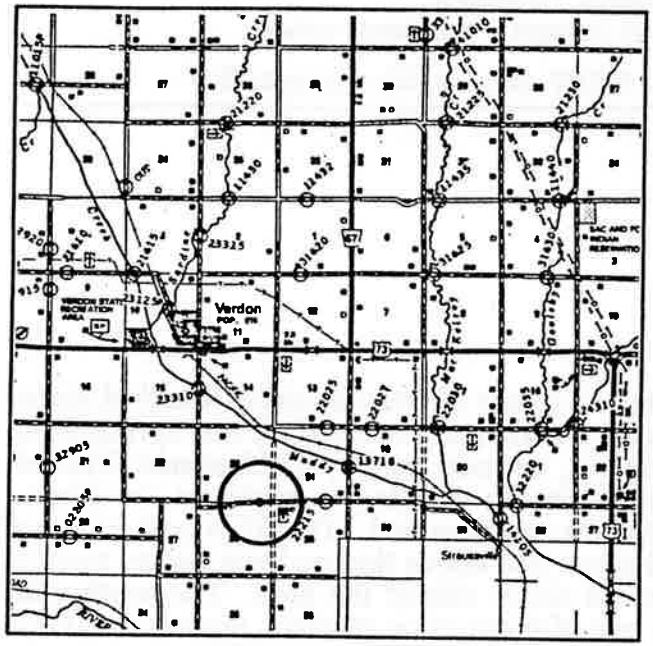
span number:	1	superstructure:	stone arch culvert
span length:	approx. 12'	substructure:	stone
total length:	approx. 35'	floor/decking:	gravel over earth fill
roadway wdt.:	approx. 30'	other features:	none

This culvert is located on the line between Sections 23 and 26, T2N, R15E, Liberty Precinct. It is one of several nearly identical stone culverts constructed in Richardson County. These single stone arch structures have spans of approximately twelve feet and spring from stone footings, approximately three feet above grade. The vault is constructed of individually set, coursed, ashlar, bushhammer finished stone. All joints are very tight and have been pointed with cement. Lines have been traced in the pointing to highlight the joints. Rather than stone abutments, earth fill resists the outward thrust of the stone arch and forms the roadway bed. The fill is held in place by stone spandrel walls rising on either elevation. At this particular culvert, the spandrels due not rise above the roadway and so merely for headwalls. The spandrels are buttressed by perpendicular, stepped, stone wingwalls set on either side of the arch. The south side wings have broken away. Dale King, a resident of Humboldt Precinct who lives adjacent to one of these stone culverts, reports that they were all constructed sometime between 1938 and 1940 under Works Progress Administration funding. According to Mr. King, the culverts were probably designed by Ben Dale, the county highway superintendent at that time. County work forces constructed the structures, and the stone came from local quarries. Mr. King reports that one of the old quarries is located in Section 25, T2N, R13E, and that it also provided the stone for the Falls City Auditorium. Due to damage to the south wingwalls, the culvert has fair integrity.

This is an example of WPA stone arch culvert construction in Nebraska. Unfortunately, due to deterioration, it has lost integrity and is not eligible for the National Register.

NAME(S) OF STRUCTURE
Culvert

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Demian Hess, personal interview with Dale King, local resident, 13 March 1990; Demian Hess, personal interview with Roger Lee, county bridge foreman, 12 March 1990; field inspection by Demian Hess, 13 March 1990.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Carns State Aid Bridge [Niobrara River Bridge] ROCK01
NDOR: C007522105

DATE(S) OF CONSTRUCTION
1912-13 (concrete arches); 1963 (trusses moved)

LOCATION
county road over the Niobrara River; S24, T32N, R19W
10.8 miles northeast of Bassett; Rock / Keya Paha Counties, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge /roadway bridge

RATING NRHP eligible (score: 64)

CONDITION
good

OWNER
Rock County

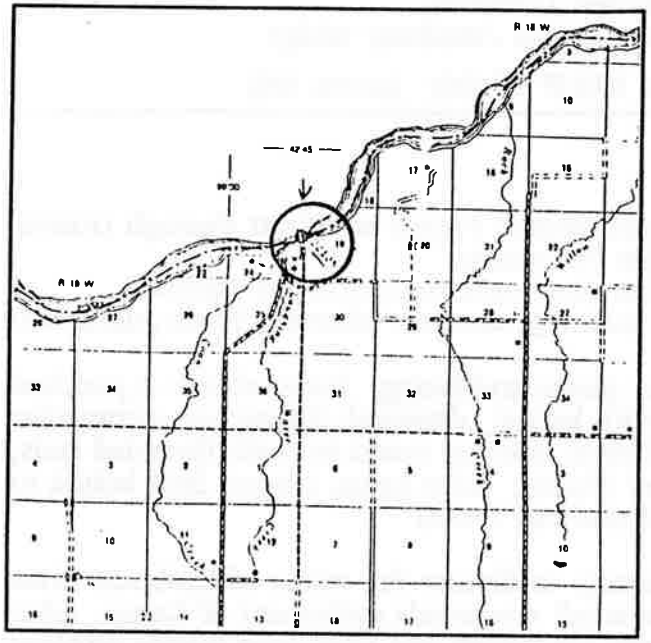
span number:	5; 2	superstructure:	reinforced concrete filled spandrel arch; steel, pinned Parker and Pratt through trusses
span length:	54.0'; 175.0'	substructure:	concrete abutments and piers with iron-edge cutwaters;
total length:	527.0'	floor/decking:	concrete deck over earth fill (arches); timber deck over steel stringers (trusses)
roadway wdt.:	14.0'	other features:	arches: plain spandrels with slight corbel at roadway; concrete pillar and beam guardrails; flared concrete cutwaters with iron edges trusses: upper chord: 2 channels with cover plates and lacing; lower chord: 2 punched rectangular eyebars; vertical: 2 channels with lacing; diagonal: 2 punched rectangular eyebars; 1 round eyebar with turnbuckle; lateral bracing: round bar with threaded ends; strut: 4 angles with lacing; 2 angles, braced (Pratt); floor beam: I-beam field bolted to vertical; guardrail: gas pipe; concrete post and rail (arch)

In the early 1900s, the commissioners of Rock, Keya Paha and Brown Counties met frequently to discuss the status of Niobrara River bridges that linked their counties. Among those often discussed was the structure near the small crossroads settlement of Carns. After frequent repairs, the Carns Bridge was finally wrecked by ice in the winter of 1910. That April the Brown and Keya Paha boards resolved unanimously that "the best and lasting benefits to the people of both counties would be the building and erection of a new steel bridge." The old bridge, meanwhile, was condemned and closed to traffic. Subsequently, in July 1911, plans for two 160-foot steel spans, presented by the Western Bridge and Construction Company, were approved by the State Engineer and adopted for the crossing. But at the August 28th bid opening, all bids were rejected, because, as reported by the State Engineer, "it was evident there had been no competition in the bidding." The project was stalled until the following May, when the Lincoln Construction Company was awarded a contract to build both the Carns and McCulley State Aid Bridges. (The McCulley Bridge - removed in the early 1980s - carried State Highway 7 across the Niobrara.) Plans for the steel trusses at Carns were abandoned in favor of a concrete structure composed of six 54-foot spans. Both bridges were completed in the summer of 1913; total cost of the Carns Bridge, $23,045.00. But the Carns Bridge ultimately proved too narrow for the broad Niobrara River, and in 1962 one of the bridge's six spans, along with several hundred feet of south approach, washed out. This span was replaced, and the bridge extended, by the addition of two steel through trusses, including a Parker truss obtained from the Schuyler State Aid Bridge over the Platte River between Colfax and Butler counties. This latter construction substantially altered the appearance of the bridge. Nevertheless, the Carns State Aid Bridge is historically important as the oldest remaining structure built under the state aid bridge program in Nebraska. Forming a regionally important crossing, it represents the success of the state aid program in providing major bridges for counties perennially strapped for funds.

NAME(S) OF STRUCTURE

Carns State Aid Bridge [Niobrara River Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C007522105; Nebraska State Board of Irrigation, **Ninth Biennial Report**, 1910-12, pages 59, 60, 68, 69; Nebraska State Board of Irrigation, **Tenth Biennial Report**, 1912-14, pages 235, 238; Keya Paha County Commissioners' Record 2: 28 February 1907 (page 142), 12 August 1907 (page 170), 23 January 1908 (page 191), 2 April 1910 (pages 283-285), 13 May 1910 (page 289), 17 June 1911 (pages 333-334), 19 June 1911 (pages 334-335), 30 June 1911 (page 337), 22 July 1911 (page 340), 30 August 1911 (page 349), 7 May 1912 (page 363), 10 July 1912 (pages 372-273), 6 August 1912 (page 375), 30 April 1913 (page 397), located at Keya Paha County Courthouse, Springview, Nebraska; Aivars G. Ronis, "Nebraska State Aid Bridges: 1911-1936," typewritten report by Nebraska Department of Roads, 1971, revised September 1978, n.p.; field inspection by Clayton Fraser, 8 August 1990.

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Big Blue River Bridge
NDOR: C007601220

SALI01

DATE(S) OF CONSTRUCTION
ca.1925

LOCATION
county road over the Big Blue River; S28/33, T8N, R4E
0.1 mile west of Crete; Saline County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 22)

CONDITION
good

OWNER
Saline County

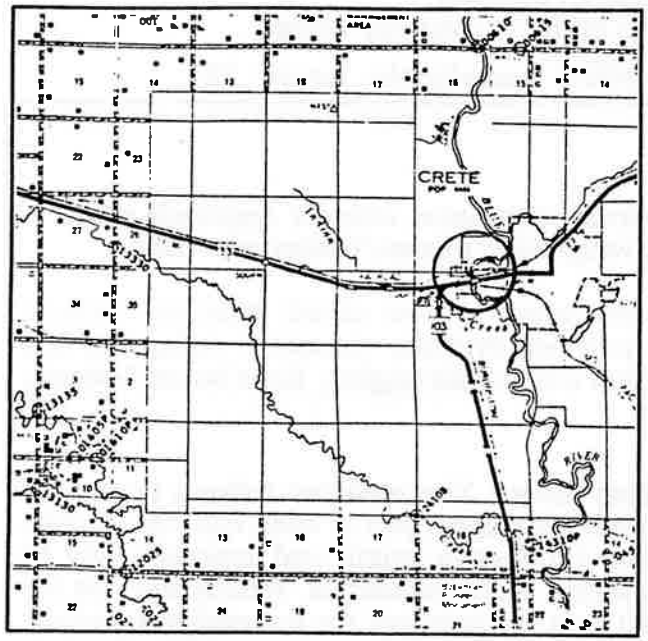
span number:	2	superstructure:	steel, 6-panel, pin-connected Pratt through truss with wood stringer approach spans
span length:	120.0'	substructure:	wood pile abutments with wood back- and wingwalls; I-beam/timber pile piers
total length:	297.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.3'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: punched eyebars; vertical: 2 channels with lacing; diagonal: punched eyebars; counters: rods; top and bottom lateral bracing: rods; portal bracing and struts: pair angles; floor beam: I-beams; guardrail: 2 pipes

Situated just west of Crete, this bridge carries an unpaved east-west road across the Big Blue River. The roadway follows the north-south line dividing sections 28 and 33 in Township 8N, Range 4E. Approached by a single timber-stringer span at each end, the double-span superstructure consists of six-panel, pin-connected, Pratt through trusses, each measuring 120 feet in length and approximately 15 feet in width. County records note that a "high truss" at this type was repaired in 1922, requiring some manner of "reinforcing" for the span. Since the present bridge shows no evidence of such modification, it was probably built as a replacement for the earlier structure. Although the bridge's date of construction is unknown, its design is typical of the Pratt through truss construction sponsored by the state engineer's office in the 1920s.

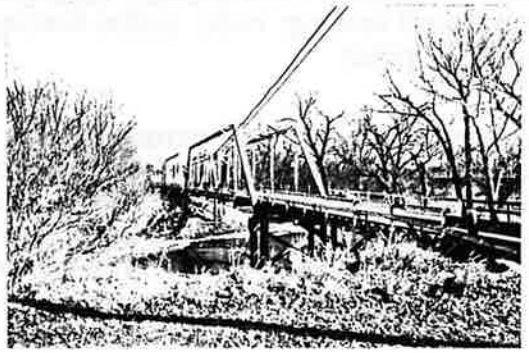
In terms of its overall engineering, the Big Blue River Bridge is fairly typical of through-truss construction in Nebraska during the 1920s. However, the lack of historical information concerning its design and construction detracts from its significance.

NAME(S) OF STRUCTURE
Big Blue River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C007601220; "Bridge S28/33, T8N, R9E," Saline County Bridge Record, located at the Saline County Courthouse, Wilbur, Nebraska; field inspection by Mary McCormick, 9 March 1989.

INVENTORIED BY	AFFILIATION	DATE
Mary McCormick, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Turkey Creek Bridge
NDOR: C007601330

SALI02

DATE(S) OF CONSTRUCTION
1927

LOCATION
county road over Turkey Creek; S36/31, T8N, R1/2E
2.7 miles southeast of Friend; Saline County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 32)

CONDITION
good

OWNER
Saline County

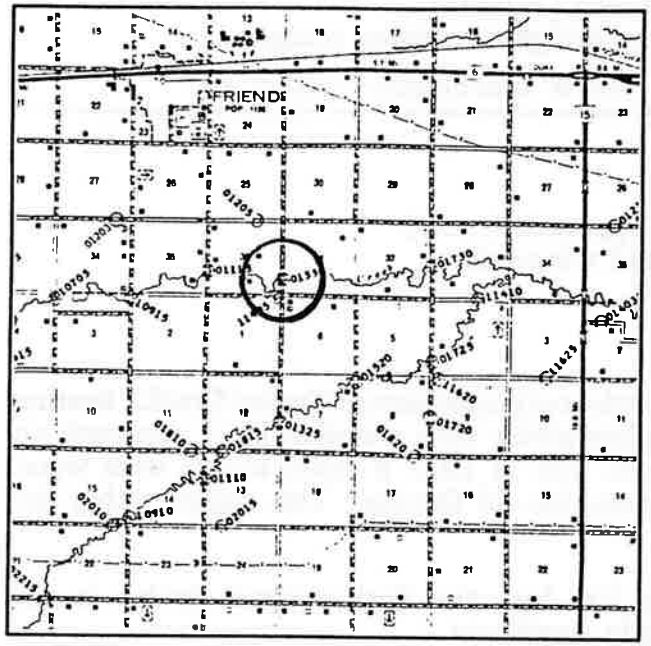
span number:	1	superstructure:	steel plate through girder; 1 steel stringer approach (south)
span length:	86.0'	substructure:	I-beam pile abutments with timber back- and wingwalls
total length:	141.0'	floor/decking:	concrete deck over steel stringers
roadway wdt.:	20.0'	other features:	I-beam joists with I-beam bridging

Located about one mile east and two miles south of Friend, this bridge carries an unpaved north-south road across Turkey Creek. Resting on I-beam piling, the double-span bridge consists of an 80-foot-long, built-up, steel, steel, plate-girder with a steel-stringer approach on the south. Both spans feature concrete decking. The county's official "bridge book" notes that in 1927 a "steel bridge with wood approaches" was constructed at this location for a total cost of $4,070 by Allied Contractors, Inc. of Omaha. This suggests that the present steel-stringer approach span is a modification.

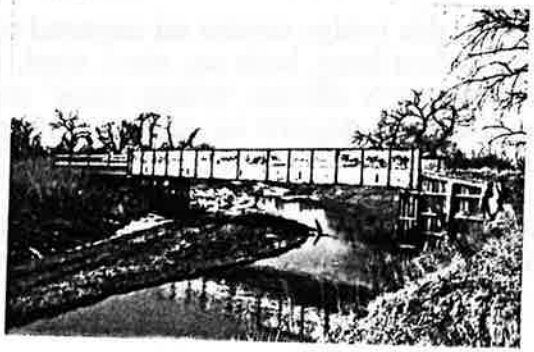
Since by the 1920s it was common to build plate-girder bridges with spans exceeding 100 feet, the Turkey Creek Bridge is not technologically significant. Nor is there evidence that the bridge crossing itself is historically significant.

NAME(S) OF STRUCTURE
Turkey Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C007601330; "Bridge S36/31, T8N, R1/2E," Saline County Bridge Record, located and the Saline County Courthouse, Wilbur, Nebraska; field inspection by Mary McCormick, 9 March 1989.

INVENTORIED BY
Mary McCormick, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Swan Creek Bridge
NDOR: C007601515

SALI03

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
county road over North Fork of Swan Creek; S17/18, T6N, R2E
5 miles east and 4.5 north of Tobias; Saline County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 22)

CONDITION
good

OWNER
Saline County

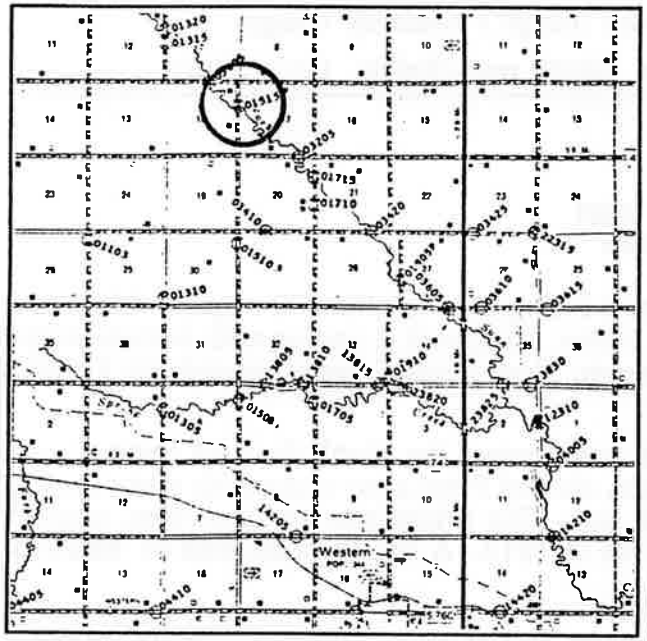
span number:	1	superstructure:	steel, 4-panel, rigid-connected Pratt pony truss
span length:	60.0'	substructure:	I-beam pile with timber back- and wingwalls
total length:	61.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.2'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 angles with batten plates; vertical: 2 pair angles with batten plates; diagonal: 2 angles with batten plates; lateral bracing: bars; sway bracing: pair angles; floor beam: I-beam; guardrail: 2 angles

Located about five miles northeast of Tobias, this bridge carries an unpaved north-south road across the North Fork of Swan Creek. Resting on I-beam piling, the single-span superstructure consists of a 60-foot-long, four-panel, riveted Pratt pony truss with sway bracing of the "outrigger type" on the web verticals. County records do not provide a construction date. The bridge's design, however, appears to be based on a standard plan prepared by Nebraska state highway authorities for county use in 1913. A construction date of "ca.1915" seems reasonable.

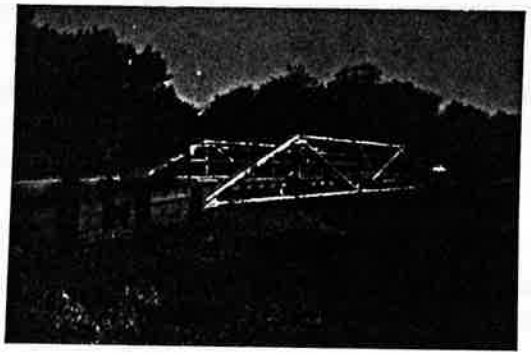
The Swan Creek Bridge is representative of state-designed Pratt pony trusses of the general period 1915 to 1920. However, the lack of historical information concerning the bridge's planning and construction detracts from its significance.

NAME(S) OF STRUCTURE
Swan Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C007601515; Standard plan for four-panel, riveted, 60-foot pony truss, 1913, in Bridge Department, Nebraska Department of Roads; **Tenth Biennial Report of the State Board of Irrigation**, 1912-14, pp. 222-223; field inspection by Mary McCormick, 9 May 1989.

INVENTORIED BY
Mary McCormick, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C007601725

SALI04

DATE(S) OF CONSTRUCTION
1920

LOCATION
COLL 17C over unnamed stream; S4/5, T7N, R2E
4.8 miles southeast of Friend; Saline County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 41)

CONDITION
good

OWNER
Saline County

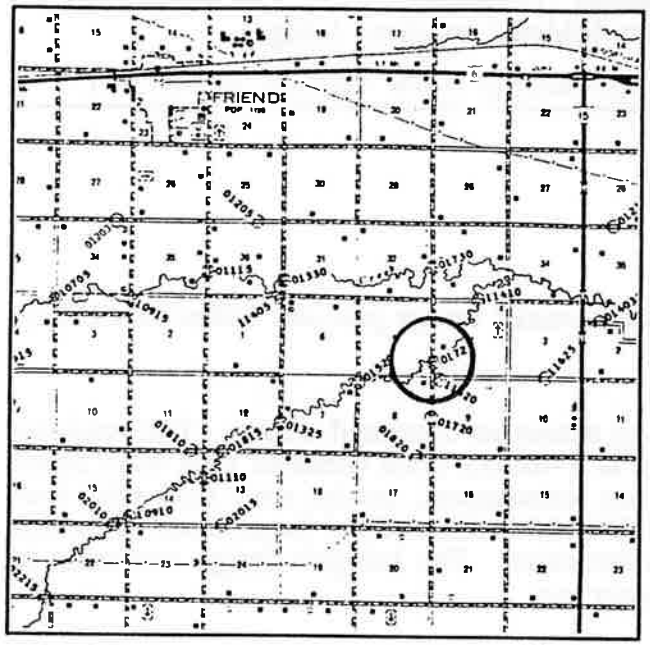
span number:	1	superstructure:	concrete filled spandrel arch
span length:	40.0'	substructure:	concrete abutments and wingwalls
total length:	41.0'	floor/decking:	concrete deck
roadway wdt.:	18.6'	other features:	guardrail: solid concrete parapet with recessed panels; bridge plaque: "Saline CO. 1920," (embossed in guardrail)

Located about five miles southeast of Friend, this bridge carries an unpaved north-south road across an unnamed stream. The roadway marks the east-west line dividing Section 4 and 5 in Township 7N, Range 2E. The bridge is a 40-foot-span concrete arch with flared wingwalls and solid parapets that rise above the roadway to form railings. The parapets are ornamented, on the river side, with four recessed panels. The roadway side of the west parapet bears the inscription, "SALINE COUNTY 1920." Since Allied Contractors of Omaha held the county's annual bridge-building contract in 1920, this firm presumably built the structure. The bridge's design conforms to standardized plans for concrete-arch bridges prepared by the state engineer's office for county use

During the late 1910s and early 1920s, the Nebraska state engineer encouraged counties to adopt standardized plans prepared by his office for concrete bridge construction, especially of the arch variety. His efforts were particularly successful in the region surrounding Nuckolls County, which boasted the state's only cement plant. Although the Saline County board preferred steel truss construction, this bridge indicates that the county was willing to experiment with concrete-arch design. Preserving integrity of design and workmanship, the bridge is significant as Saline County's only documented example of concrete-arch construction.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C007601725; Saline County Supervisors' Record, 25 May 1920, located at Saline County Courthouse, Wilbur, Nebraska; Standard plans for concrete arch bridges, microfiche, in Bridge Division, Nebraska Department of Roads; Nebraska State Board of Irrigation, Highways and Drainage, **Tenth Biennial Report**, 1912-14, pp. 231-232; Nebraska Department of Public Works, **Monthly Report**, October 1919, p. 17; Donald D. Price, "Cement Plants and the Production of Portland Cement in Nebraska," **Nebraska Blue Print**, September 1931, p. 11; field inspection by Mary McCormick, 4 March 1989.

INVENTORIED BY
Mary McCormick, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Swan Creek Bridge
NDOR: C007601905P

SALI05

DATE(S) OF CONSTRUCTION
1927

LOCATION
county road over North Fork of Swan Creek; SW1/4, S27, T6N, R2E
4.0 miles northeast of Western; Saline County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 20)

CONDITION
good

OWNER
Saline County

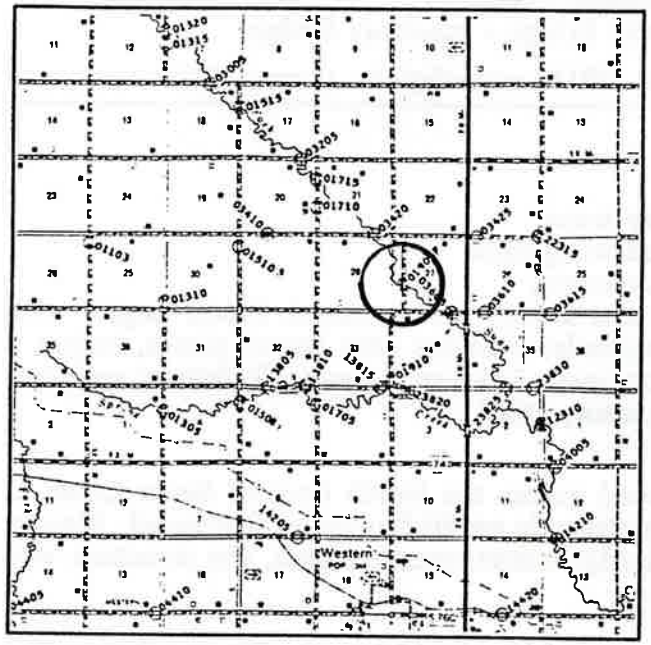
span number:	1	superstructure:	steel, 5-panel, rigid-connected Warren pony truss
span length:	80.0'	substructure:	I-beam pile with corrugated steel back- and wingwalls
total length:	81.0'	floor/decking:	concrete on corrugated steel over I-beam stringers
roadway wdt.:	27.3'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 pair angles with batten plates; vertical: 2 pair angles; diagonals: 2 angles with batten plates, except 2 pair angles with batten plates at hip; floor beam: I-beams; guardrail: lattice; endpost-mounted bridge plate: **E.G. Bigham, Contractor, 1927**

Located about four miles north of Western, this bridge carries an unpaved north-south road across the North Fork of Swan Creek in Section 27, Township 6N, Range 122E. Resting on I-beam piling, the single-span superstructure is an 80-foot-long, five-panel, Warren pony truss with an approximately 27-foot-wide roadway. According to a plaque on the bridge's northwest endpost, the structure was erected in 1927 by "E.G. Bigham, Contractor."

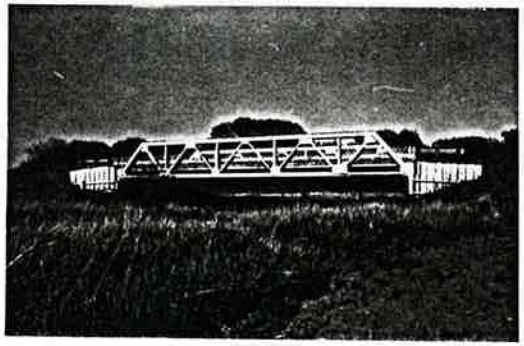
Although Nebraska state highway authorities developed standardized plans for Warren pony trusses in the 1920s, the Warren design was never as widely used in the state as the Pratt design. The only other notable example in Saline County is this bridge. According to its bridge plaque, this structure is actually a 1929 Minnesota bridge, which was moved to its present site an undetermined date. It is possible that this bridge has a similar history. Saline County records indicate that Allied Contractors, Inc. of Omaha handled the county's bridge work in 1927; there is no mention of E. G. Bigham. The uncertainty of the bridge's provenance adversely affects its historical significance.

NAME(S) OF STRUCTURE
Swan Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C007601905P; "Bridge and Culvert Record," 1913-1943, in County Clerk's Office, Saline County Courthouse, Wilbur, Nebraska; field inspection by Mary McCormick, 9 March 1989.

INVENTORIED BY	AFFILIATION	DATE
Mary McCormick, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Turkey Creek Bridge
NDOR: C007602630

SALI06

DATE(S) OF CONSTRUCTION
ca.1935

LOCATION
county highway over Turkey Creek; S6/31, T6/7N, R4E
3.5 miles northeast of Wilbur; Saline County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 22)

CONDITION
good

OWNER
Saline County

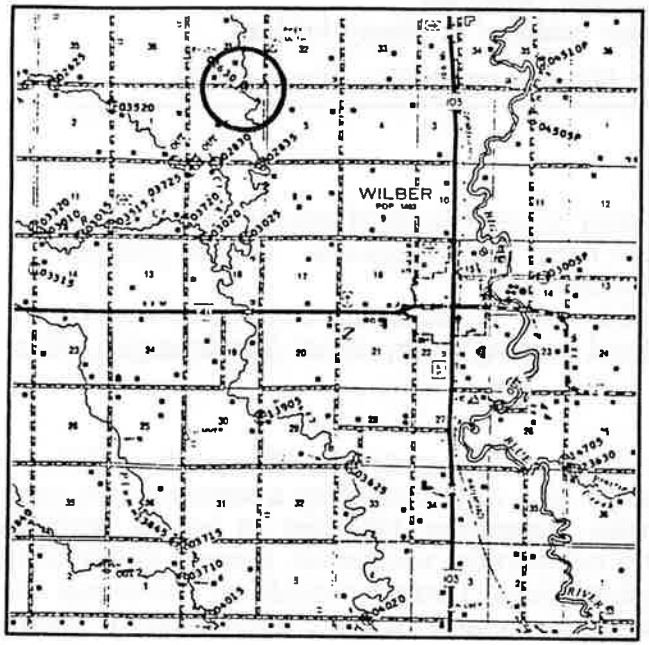
span number:	1	superstructure:	steel, 5-panel, rigid-connected Camelback pony truss with steel stringer approach spans
span length:	100.0'	substructure:	I-beam pile abutments with corrugated steel back- and wingwalls; I-beam pile piers
total length:	173.0'	floor/decking:	concrete on corrugated steel over I-beam stringers
roadway wdt.:	24.7'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 channels with batten plates; vertical and diagonal: I-beams; lateral bracing: rods; strut: 2 pair angles; floor beam: I-beams; guardrail: small I-beams

Located about three miles northwest of Wilbur, this bridge carries an unpaved east-west road across Turkey Creek. The roadway follows the north-south line between Section 6, Township 6N and Section 31, Township 7N in Range 4E. Approached by a steel-stringer span at each end, the main span consists of a riveted, steel, five-panel, camelback pony truss, measuring 100 feet in length with an approximately 24-foot-wide roadway. Abutments and piers consist of I-beam piling. About 6 miles to the northwest, there is an identical camelback span (**SALI08**), which suggests that the two bridges were designed from a standard plan. County records do not reveal the circumstances of either bridge's construction. But on the basis of their relatively wide roadway and heavy construction, it seems reasonable to assign an erection date of about 1935.

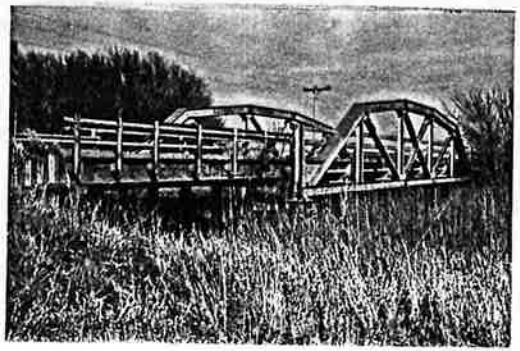
The Turkey Creek Bridge is representative of bridge construction practices of the mid-1920s. However, the lack of specific information concerning design and construction detracts from the structure's significance.

NAME(S) OF STRUCTURE
Turkey Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C007602630; field inspection by Mary McCormick, 9 March 1989.

INVENTORIED BY
Mary McCormick, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Swan Creek Bridge
NDOR: C007602710

SALI07

DATE(S) OF CONSTRUCTION
ca.1927

LOCATION
county road over North Fork of Swan Creek; S29/30, T5N, R3E
2.0 miles west of Swanton; Saline County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 22)

CONDITION
good

OWNER
Saline County

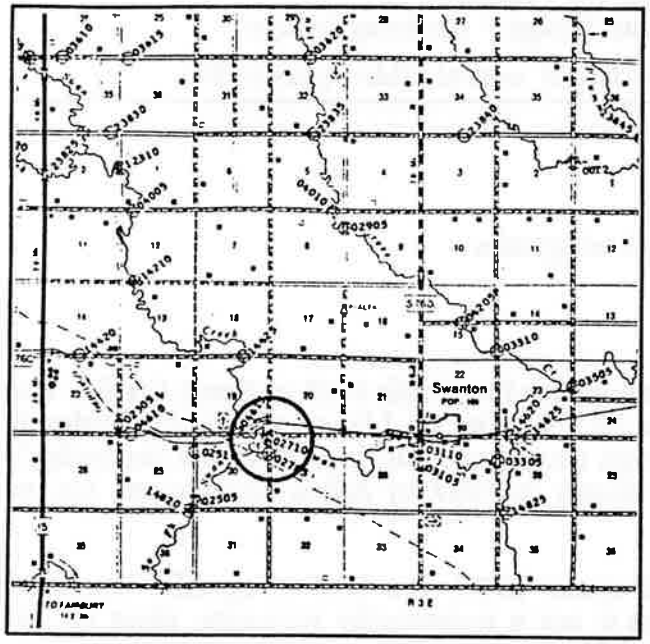
span number:	1	superstructure:	steel plate through girder
span length:	87.0'	substructure:	I-beam pile with corrugated steel back- and wingwalls
total length:	92.0'	floor/decking:	concrete on corrugated steel
roadway wdt.:	20.0'	other features:	I-beam joists

Located about four miles southeast of Western, this bridge carries an unpaved east-west road across the North Fork of Swan Creek. The roadway follows the north-south line dividing Sections 29 and 30 in Township 5N, Range 3E. Resting on I-beam piling, the bridge is a built-up, through plate-girder structure with an 86-foot span and 20-foot roadway. Although county records do not discuss the bridge's construction, they do indicate that an almost identical span was erected elsewhere in the county in 1927 by Allied Contractors, Inc. of Omaha. It therefore seems reasonable to assign a construction date of "ca.1927."

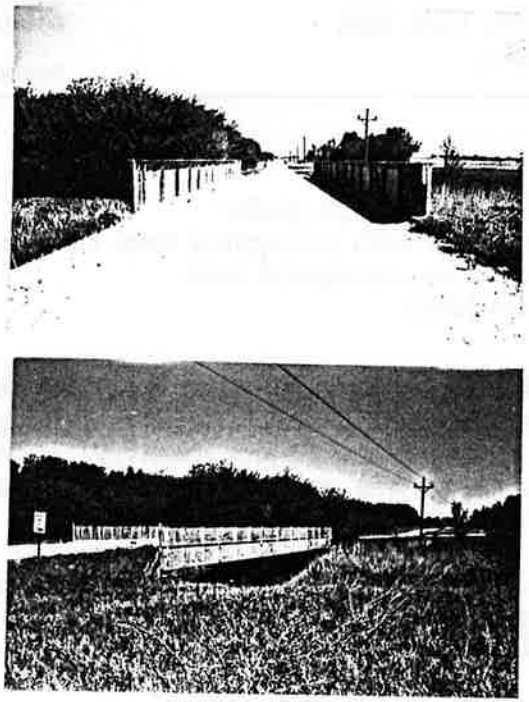
Although circumstantial evidence suggests that the Swan Creek Bridge was constructed about 1927, the lack of specific historical information detracts from the structure's significance. Technologically speaking, the bridge is not a noteworthy structure, since its 86-foot span was well below the capabilities of plate-girder construction during the 1910s and 1920s.

NAME(S) OF STRUCTURE
Swan Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C007602710; field inspection by Mary McCormick, 10 May 1989.

INVENTORIED BY
Mary McCormick, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Turkey Creek Bridge
NDOR: C007602730

SALI08

DATE(S) OF CONSTRUCTION
ca.1935

LOCATION
county road over Turkey Creek; S5/6, T7N, R3E
2.7 miles south of Dorchester; Saline County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 22)

CONDITION
good

OWNER
Saline County

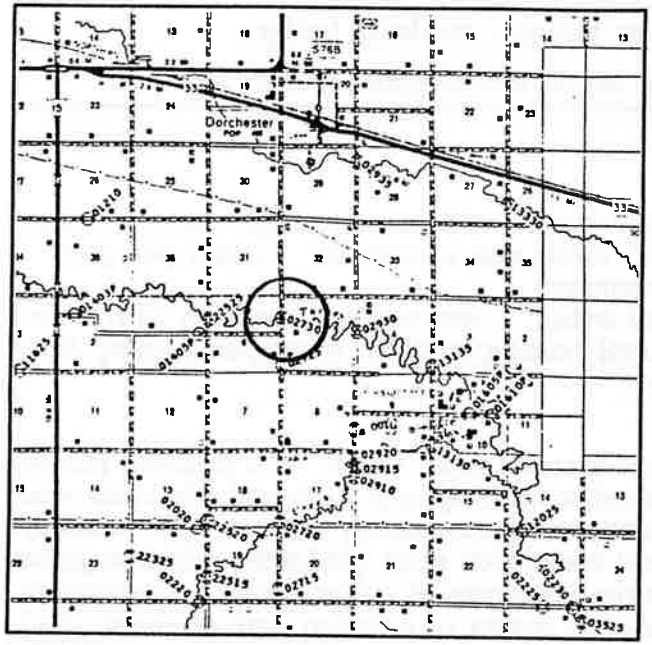
span number:	1	superstructure:	steel, 5-panel, rigid-connected Camelback pony truss with steel stringer approach spans
span length:	100.0'	substructure:	I-beam pile abutments with corrugated steel back- and wingwalls; I-beam pile piers
total length:	181.0'	floor/decking:	concrete on corrugated steel over I-beam stringers
roadway wdt.:	24.3'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 channels with batten plates; vertical and diagonal: I-beams; lateral bracing: angles; strut: pair angles; floor beam: I-beam; guardrail: 2 small I-beams

Located about three miles south of Dorchester, this bridge carries an unpaved north-south road across Turkey Creek. The roadway follows the east-west line between Sections 5 and 6 in Township 7N, Range 3E. Approached by a steel-stringer span at each end, the main span consists of a riveted, steel, five-panel, camelback pony truss, measuring 100 feet in length with an approximately 24-foot-wide roadway. Abutments and piers consists of I-beam piling. About 6 miles to the southeast, an identical camelback span (**SALI06**), which suggests that the two bridges were designed from a standard plan. County records do not reveal the circumstances of either bridge's construction. But on the basis of their relatively heavy construction and wide roadway, it seems reasonable to assign an erection date of about 1935.

The Turkey Creek Bridge is representative of bridge construction practices of the mid-1920s. However, the lack of specific information concerning its design and construction detracts from its significance.

NAME(S) OF STRUCTURE
Turkey Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C007602730; field inspection by Mary McCormick, 9 March 1989.

INVENTORIED BY
Mary McCormick, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Blue River Bridge
NDOR: C007603305P

SALI09

DATE(S) OF CONSTRUCTION
1918

LOCATION
county road over West Fork of Blue River; NW1/4, S11, T8N, R3E
2.5 miles northeast of Dorchester; Saline County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 38)

CONDITION
good

OWNER
Saline County

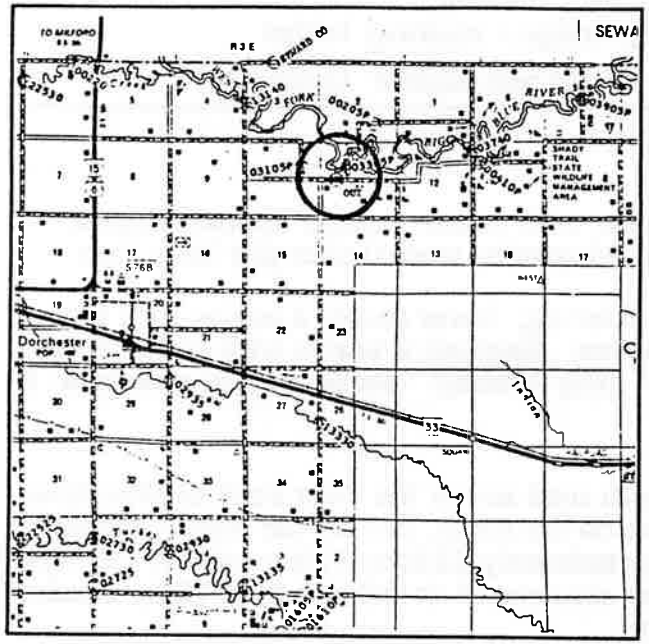
span number:	1	superstructure:	steel, 5-panel, rigid-connected Pratt pony truss with timber stringer approach spans
span length:	100.0'	substructure:	wood pile abutments with timber back- and wingwalls; steel/timber pile bent piers
total length:	242.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.3'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 angles with batten plates; vertical: 2 pair angles with batten plates; diagonal: 2 angles with batten plates; strut: 2 pair angles; floor beam: I-beams; sway bracing: paired angles; guardrail: 3 angles

Located about three miles northeast of Dorchester, this bridge carries an unpaved north-south road across the West Fork of Blue River in Section 11, Township 8N, Range 3E. Approached by a series of timber-stringer spans (five on the south, two on the north), the main span is a steel, five-panel, riveted Pratt Pony truss measuring 100 feet in length with an approximately 15-foot-wide roadway. All web verticals have sway bracing of the "outrider" type. County records indicate that a bridge was constructed at this site in 1918 by Omaha Structural Steel Works, which held the county's annual bridge-building contract at that time.

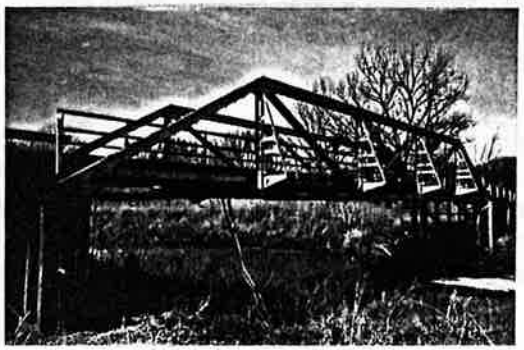
As stipulated by the Nebraska state legislature in 1913, the state engineer prepared a series of standardized bridge plans for compulsory use by the counties. Saline County used the standard, 100-foot, Pratt pony truss design for at least seven bridges, including this bridge. Documented construction dates range from 1918 to 1929. Although this design represented the longest span length developed for this type of pony truss, this fact is only marginally noteworthy. More significant, multiple-span examples of this truss type - such as the Lisco State Aid Bridge (1928) in Garden County and the Lewellen State Aid Bridge (1927) in Morrill County - remain in use, unaltered, over the Platte River in western Nebraska.

NAME(S) OF STRUCTURE
Blue River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C007603305P; County Commissioners Journal, 5 February, 26 March 1918, in Saline County Courthouse, Wilbur, Nebraska; **Tenth Biennial Report of the State Board of Irrigation, Highways and Drainage**, 1912-14, pp. 222-223; Standard bridge plans, microfiche, in Bridge Division, Nebraska Department of Roads; field inspection by Mary McCormick, 9 March 1989.

INVENTORIED BY
Mary McCormick, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C007603410

SALI10

DATE(S) OF CONSTRUCTION
ca.1935

LOCATION
county road over unnamed stream; S20/29, T6N, R2E
6.5 miles northeast of Tobias; Saline County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 22)

CONDITION
good

OWNER
Saline County

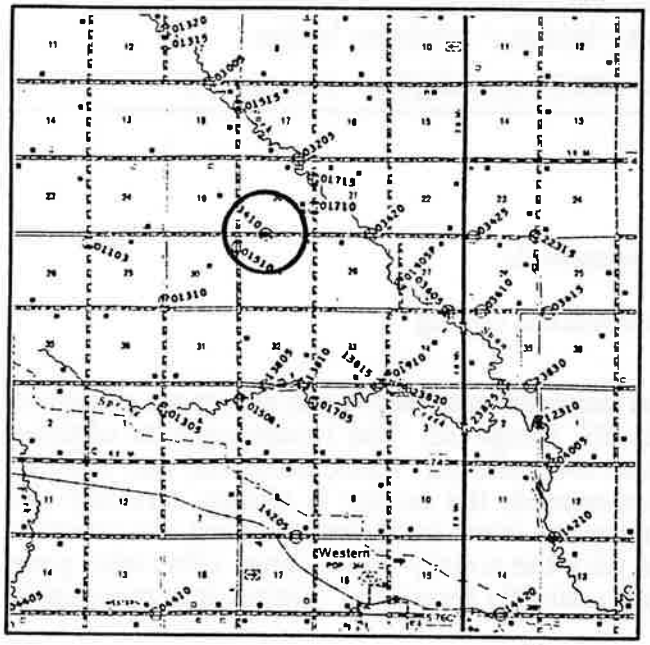
span number:	3	superstructure:	concrete slab with stone veneer
span length:	19.0'	substructure:	concrete with stone-faced abutments with wingwalls
total length:	64.0'	floor/decking:	concrete slab with gravel surface
roadway wdt.:	30.4'	other features:	guardrail: 3-foot-high cut ashlar wall with concrete coping

Located about six miles east and three miles north of Tobias, Bridge C007603410 carries an unpaved east-west road across an unnamed stream. The roadway follows the north-south line between Sections 20 and 29 in Township 6N, Range 2E. The bridge consists of three concrete-slab spans with flared, sloping wingwalls. Parapets rise above the roadway to form low railings. Piers, parapets, and railings are faced with coursed rubble limestone. Although a construction date has not been documented, the bridge is almost certainly the product of the New Deal era. During that period, government work-relief programs often turned to labor-intensive masonry construction in order to employ as many people as possible on a single project. It is difficult to imagine why the county would have otherwise gone to the expense of ornamenting such an inconspicuous structure as this. In light of the bridge's probably New Deal origins, it is reasonable to assign it a construction date of "c. 1935."

The bridge's significance is adversely affected by the lack of firm historical documentation of its design and construction, especially since there are well-documented examples of New Deal masonry bridge work surviving in Nebraska.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C007603410; field inspection by Mary McCormick, 9 May 1989.

INVENTORIED BY
Mary McCormick, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Swan Creek Bridge
NDOR: C007603505

SALI11

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
county road over Swan Creek; S23/24, T5N, R3E
1.5 miles northeast of Swanton; Saline County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 19)

CONDITION
good

OWNER
Saline County

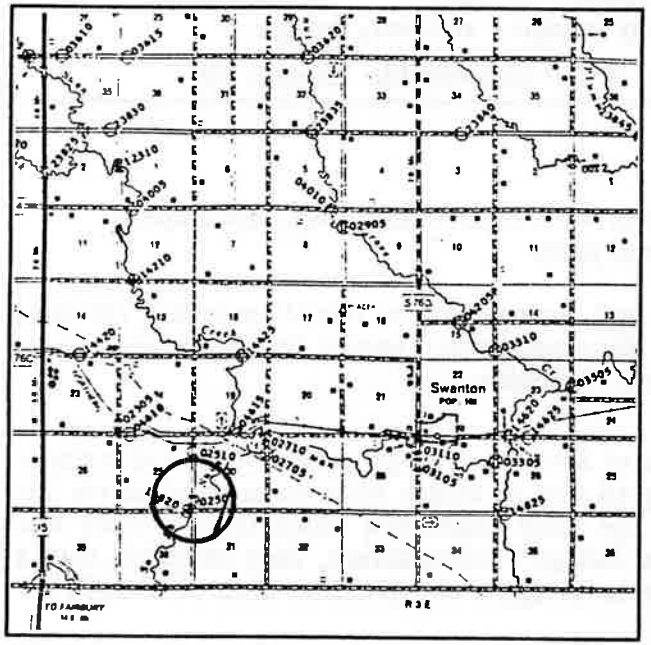
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt pony truss with steel stringer approach spans
span length:	45.0'	substructure:	concrete abutment with wingwalls; concrete piers
total length:	76.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.3'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: punched eyebars; vertical: 2 pair angles with batten plates; diagonal: rods; lateral bracing: rods; strut: pair angles; floor beam: I-beams; guardrail: 2 angles

This bridge carries an unpaved north-south road across Swan Creek about 2 miles northeast of Swanton. Approached by a steel-stringer span at each end, the main span is a three-panel, pin-connected Pratt pony truss measuring 45 feet in length with an approximately 15-foot-wide roadway. The bridge's design is compatible with standard plans prepared by the state engineer's office in the 'teens and 'twenties. Abutments and piers are concrete. Although county records do not discuss the bridge's construction, they establish that a structure of similar design (SALI16) was built in 1922. Consequently, it seems reasonable to assign a construction date of "ca.1915."

Although the Swan Creek Bridge is representative of standardized state plans, the lack of specific historical information concerning its design and construction detracts from its significance.

NAME(S) OF STRUCTURE
Swan Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C007603505; field inspection by Mary McCormick, 9 March 1989.

INVENTORIED BY
Mary McCormick, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Swan Creek Bridge
NDOR: C007603605

SALI12

DATE(S) OF CONSTRUCTION
ca.1925

LOCATION
county road over North Fork of Swan Creek; S27/34, T6N, R2E
4.0 miles northwest of Western; Saline County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 22)

CONDITION
good

OWNER
Saline County

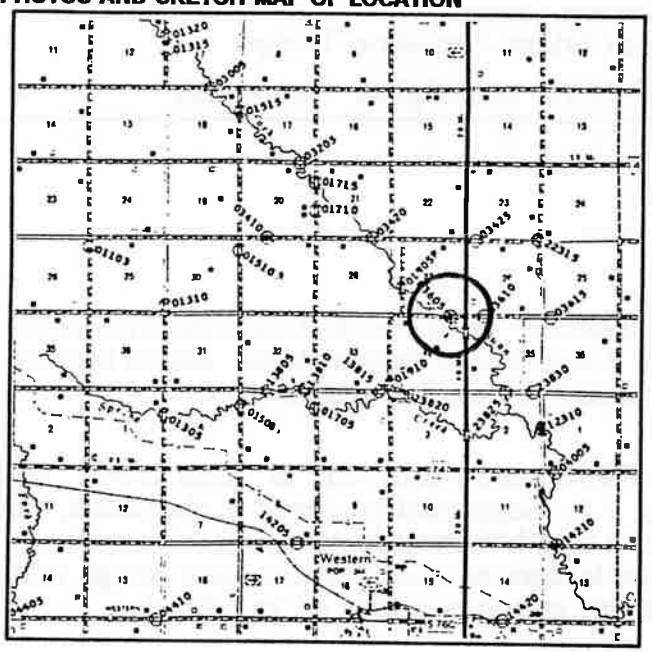
span number:	1	superstructure:	steel, 5-panel, rigid-connected Pratt pony truss
span length:	100.0'	substructure:	concrete abutments with wingwalls
total length:	102.0'	floor/decking:	concrete over I-beam stringers
roadway wdt.:	19.0'	other features:	upper chord: 2 channels with cover plate and lattice; lower chord: 2 channels with batten plates; vertical: built-up I-beam; diagonal: 2 angles with batten plates; lateral bracing: angle; strut: pair angles; floor beam: I-beams; guardrail: 2 angles

Situated about four miles north of Western, this bridge carries an unpaved, east-west road across the North Fork of Swan Creek. The roadway follows the north-south line between Sections 27 and 34 in Township 6N, Range 2 E. Supported by concrete abutments, the single-span superstructure is a steel, five-panel, riveted Pratt pony truss, measuring 100 feet in length with a nineteen-foot-wide roadway. Although county records do not discuss the bridge's construction, they do establish that other bridges of essentially the same design were built in the county between 1918 and 1929. Consequently, it seems reasonable to assign this structure a date of "ca.1925."

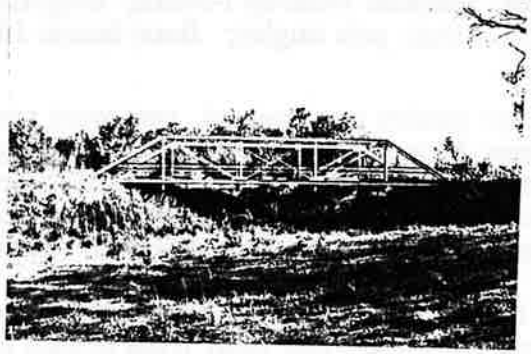
As stipulated by the Nebraska state legislature in 1913, the state engineer prepared a series of standardized bridge plans for compulsory use by the counties. Saline County used the standard, 100-foot, Pratt pony truss design for at least seven bridges, including this bridge. Documented construction dates range from 1918 to 1929. Although this design represented the longest span length developed for this type of pony truss, this fact is only marginally noteworthy. More significant, multiple-span examples of this truss type - such as the Lisco State Aid Bridge (1928) in Garden County and the Lewellen State Aid Bridge (1927) in Morrill County - remain in use, unaltered, over the Platte River in western Nebraska.

NAME(S) OF STRUCTURE
Swan Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C007603605; **Tenth Biennial Report of the State Board of Irrigation, Highways and Drainage**, 1912-14, pp. 222-223; Standard bridge plans, microfiche, in Bridge Division, Nebraska Department of Roads; field inspection by Mary McCormick, 9 March 1989.

INVENTORIED BY
Mary McCormick, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Big Blue River Bridge
NDOR: C007603905P

SALI13

DATE(S) OF CONSTRUCTION
ca.1930

LOCATION
county road over West Fork of Big Blue River; S5, T8N, R4E
4.5 miles northwest of Crete; Saline County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 28)

CONDITION
good

OWNER
Saline County

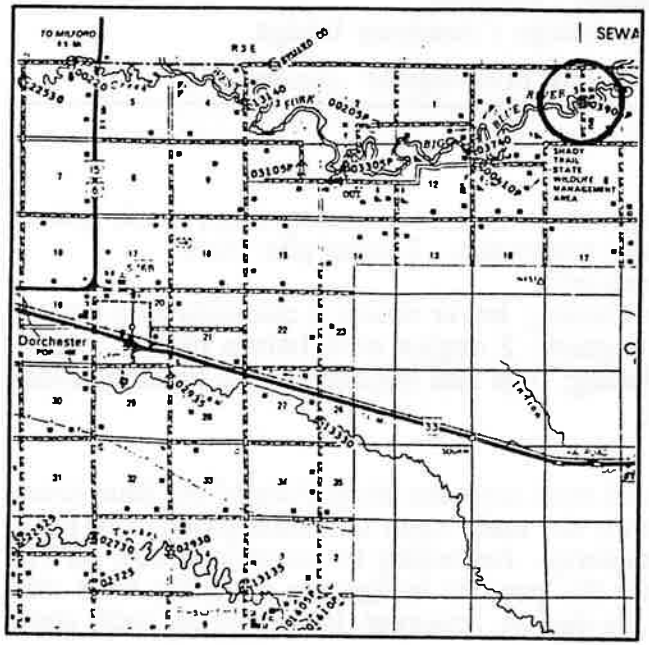
span number:	1	superstructure:	steel, 9-panel, rigid-connected Parker through truss with steel stringer approach spans
span length:	170.0'	substructure:	I-beam pile abutments with timber back- and wingwalls; I-beam pile piers
total length:	287.0'	floor/decking:	concrete on corrugated steel over I-beam stringers
roadway wdt.:	20.0'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 channels with batten plates; vertical: 2 channels with lacing; diagonal: 2 angles with batten plates; portal bracing: pair angles; strut: 2 angles with lacing; top and bottom lateral bracing: rods; floor beam: I-beams; guardrail: 2 channels

Located about mile west and five miles north of Crete, Bridge C007603905P carries an unpaved road over the West Fork of Big Blue River in Section 5 of Township 8N, Range 124E. Approached by a steel-stringer span at each end, the main span is a nine-panel, 170-foot-long Parker through truss with concrete decking, I-beam substructure, and a 20-foot-wide roadway. According to county records, an 11-span, 352-foot-long bridge was erected at the site in 1923. Substructural remnants beneath the present bridge are probably from this earlier structure. Neither county nor state records document the construction of this truss. Its design, however, is compatible with state plans of the late 1920s and 1930s.

Although the bridge is a typical example of riveted Parker truss construction, the lack of historical information concerning its design and erection detracts from its historical significance.

NAME(S) OF STRUCTURE
Big Blue River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C007603905P; "Bridge S5, T8N, R4E," Saline County Bridge Record, located at the Saline County Courthouse, Wilbur, Nebraska; field inspection by Mary McCormick, 8 March 1989.

INVENTORIED BY
Mary McCormick, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Turkey Creek Bridge
NDOR: C007604020

SALI14

DATE(S) OF CONSTRUCTION
ca.1925

LOCATION
COLL 40C over Turkey Creek; S4/9, T5N, R4E
4.0 miles southwest of Wilbur; Saline County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 22)

CONDITION
good

OWNER
Saline County

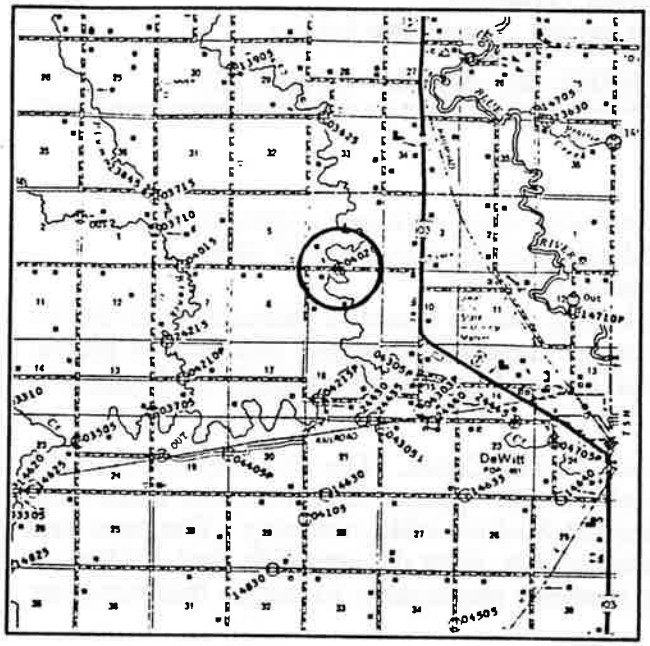
span number:	1	superstructure:	steel, 5-panel, rigid-connected Pratt pony truss with steel stringer approach spans
span length:	100.0'	substructure:	I-beam pile abutments with timber back- and wingwalls; I-beam pile piers
total length:	165.0'	floor/decking:	corrugated steel with gravel surface over I-beam stringers
roadway wdt.:	19.9'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 channels with batten plates; vertical: 2 pair angles with batten plates; diagonal: 2 angles with batten plates; strut: steel plate; lateral bracing: rods; floor beam: I-beams; guardrail: 2 channels

Located about four miles south of Wilbur, this bridge carries an unpaved east-west road across Turkey Creek. The roadway follows the north-south line between Sections 4 and 9 in Township 5 N, Range 4E. Approached by a steel stringer span at each end, the main span is a steel, five-panel, riveted, Pratt pony truss, measuring 100 feet in length with an approximately 20-foot-wide roadway. The piers and abutments consist of I-beam piling. Although county records do not discuss the bridge's construction, they do establish that bridges of essentially the same design were built in the county between 1918 and 1929. Consequently, it seems reasonable to assign this structure a construction date of "c. 1925."

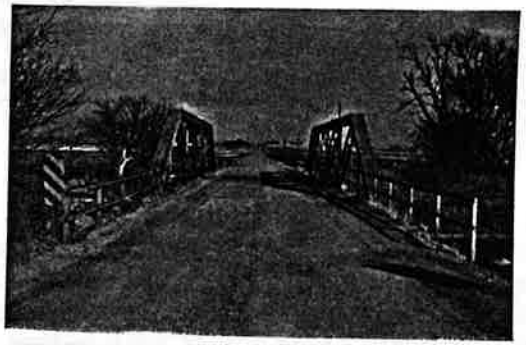
As stipulated by the Nebraska state legislature in 1913, the state engineer prepared a series of standardized bridge plans for compulsory use by the counties. Saline County used the standard, 100-foot, Pratt pony truss design for at least seven bridges, including this bridge. Documented construction dates range from 1918 to 1929. Although this design represented the longest span length developed for this type of pony truss, this fact is only marginally noteworthy. More significant, multiple-span examples of this truss type - such as the Lisco State Aid Bridge (1928) in Garden County and the Lewellen State Aid Bridge (1927) in Morrill County - remain in use, unaltered, over the Platte River in western Nebraska.

NAME(S) OF STRUCTURE
Turkey Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C007604020; County Commissioners Journal, 5 February 1918, in Saline County Courthouse, Wilbur, Nebraska; "Bridge S24 T5 R4, "Bridge and Culvert Record," in Saline County Courthouse; **Tenth Biennial Report of the State Board of Irrigation, Highways and Drainage**, 1912-14, pp. 222-223; Standard bridge plans, microfiche, in Bridge Division, Nebraska Department of Roads; field inspection by Mary McCormick, 9 March 1989.

INVENTORIED BY
Mary McCormick, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Turkey Creek Bridge
NDOR: C007604705P

SALI15

DATE(S) OF CONSTRUCTION
1929

LOCATION
county road over Turkey Creek; NW1/4, S24, T5N, R4E
0.3 miles south of Dewitt; Saline County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 34)

CONDITION
good

OWNER
Saline County

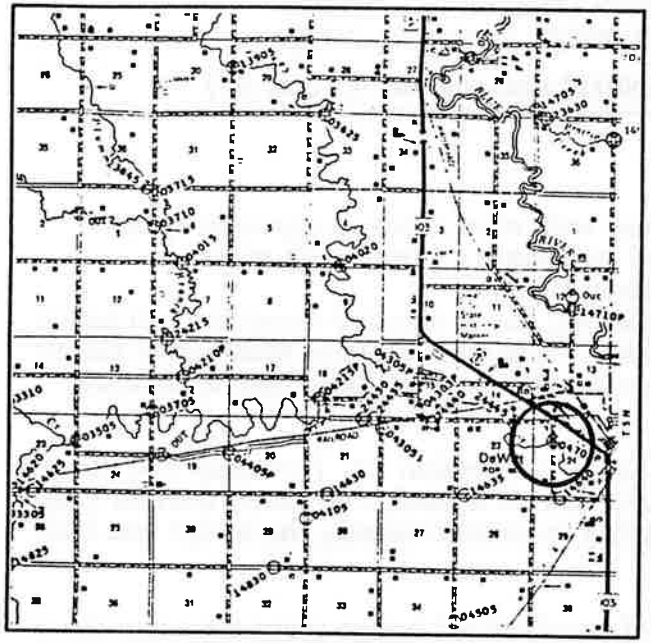
span number:	1	superstructure:	steel, 5-panel, rigid-connected Pratt pony truss with steel stringer approach spans
span length:	100.0'	substructure:	I-beam pile abutments with timber back- and wingwalls; I-beam pile piers
total length:	292.0'	floor/decking:	corrugated steel with gravel surface over I-beam stringers
roadway wdt.:	15.6'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 channels with batten plates; vertical: 2 pair angles with batten plates; diagonal: 2 angles with batten plates; lateral bracing: rods; strut: steel plate; floor beam: I-beams; guardrail: 2 channels

Located just south of Dewitt, this bridge carries an unpaved north-south road over Turkey Creek sin Section 24, Township 5N, Range E4. Approached by six steel stringer spans (three on the north, three on the south), the main span is a steel, five-panel, riveted, Pratt pony truss, measuring 100 feet in length with an approximately 16-foot-wide roadway. According to county records, the bridge was built in 1929 for a total cost of $13,714 by Allied Contractors, Inc. of Omaha.

As stipulated by the Nebraska state legislature in 1913, the state engineer prepared a series of standardized bridge plans for compulsory use by the counties. Saline County used the standard, 100-foot, Pratt pony truss design for at least seven bridges, including this bridge. Documented construction dates range from 1918 to 1929. Although this design represented the longest span length developed for this type of pony truss, this fact is only marginally noteworthy. More significant, multiple-span examples of this truss type - such as the Lisco State Aid Bridge (1928) in Garden County and the Lewellen State Aid Bridge (1927) in Morrill County - remain in use, unaltered, over the Platte River in western Nebraska.

NAME(S) OF STRUCTURE
Turkey Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C007604705P; "Bridge S24, T5N, R4E," Saline County Bridge Record, located at the Saline County Courthouse, Wilbur, Nebraska; **Tenth Biennial Report of the State Board of Irrigation, Highways and Drainage**, 1912-14, pp. 222-223; Standard bridge plans, microfiche, in Bridge Division, Nebraska Department of Roads; field inspection by Mary McCormick, 9 March 1989.

INVENTORIED BY
Mary McCormick, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Swan Creek Bridge
NDOR: C007612310

SALI16

DATE(S) OF CONSTRUCTION
1922

LOCATION
county road over North Fork of Swan Creek; S11/12, T5N, R2E
3.0 miles northeast of Western; Saline County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 29)

CONDITION
good

OWNER
Saline County

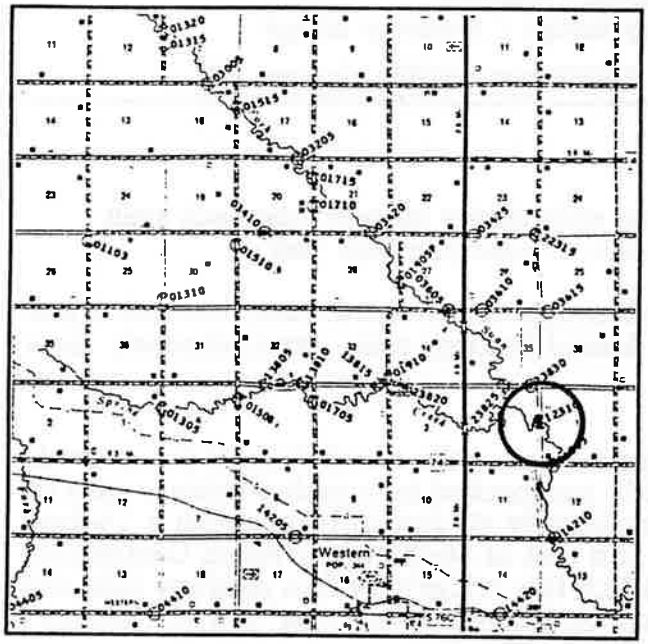
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt pony truss with timber stringer approach span
span length:	40.0'	substructure:	concrete/timber pile abutments with wingwalls; I-beam pile bent pier
total length:	71.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	14.2'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: bars; vertical: 2 pair angles with batten plates; diagonal: bars; lateral bracing: rods; strut: channel; floor beam: I-beam; guardrail: 2 channels

Situated about three miles northeast of Western, this bridge carries an unpaved north-south road across the North Fork of Swan Creek. The roadway follows the east-west line between Sections 1 and 2 in Township 5N, Range 2E. Approached by a timber-stringer span on the south, the main span is a three-panel, pin-connected Pratt pony truss, measuring approximately 40 feet in length with a 14-foot-wide roadway. County records indicate that the bridge was originally constructed in 1922 at a cost of $6438.62 by Allied Contractors, Inc., of Omaha. Although the county was reportedly using state standard bridge plans in 1922, this bridge's 14-foot roadway falls two feet short of the state's requirement at that date. It is possible that this deficiency resulted from the bridge's "re-erecting" in 1927, county's official bridge record.

Because of its narrow roadway, this bridge is a poor example of state standardized bridge construction of the 1920s.

NAME(S) OF STRUCTURE
Swan Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C007612310; Bridge S1/2, T5N,R2E, "Bridge and Culvert Record," in County Clerk's Office, Saline County Courthouse, Wilbur, Nebraska; **Thirteen Biennial Report of the Department of Public Works**, 1919-20, p. 553; Standard bridge plans, microfiche, Bridge Division, Nebraska Department of Roads; field inspection by Mary McCormick, 10 May 1989.

INVENTORIED BY
Mary McCormick, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Big Blue River Bridge
NDOR: C007613140

SALI17

DATE(S) OF CONSTRUCTION
1929

LOCATION
county road over West Fork of Big Blue River; S3/4, T8N, R3E
3.5 miles northeast of Dorchester; Saline County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 34)

CONDITION
good

OWNER
Saline County

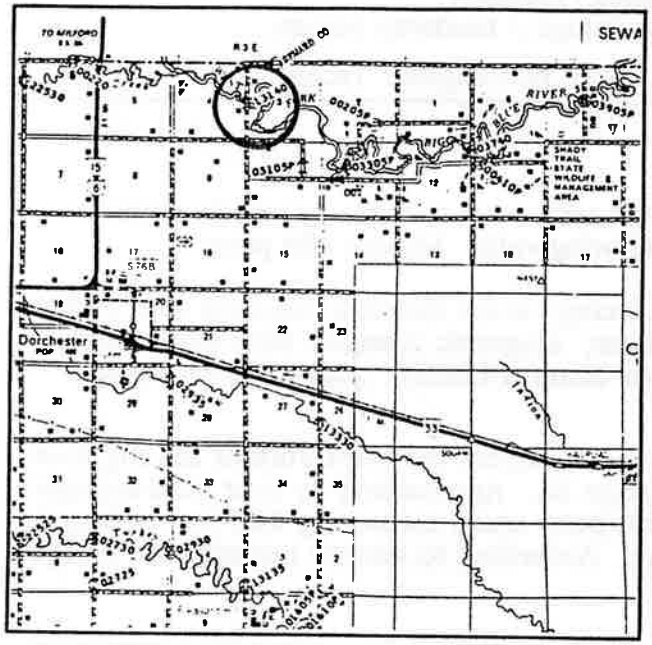
span number:	1	superstructure:	steel, 5-panel, rigid-connected Pratt pony truss with steel stringer approach spans
span length:	100.0'	substructure:	I-beam pile abutments with timber back- and wingwalls; I-beam pile piers
total length:	228.0'	floor/decking:	timber deck
roadway wdt.:	15.7'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 channels with batten plates; vertical: 2 pair angles with batten plates; diagonal: 2 angles with batten plates; lateral bracing: rods; strut: steel plate; floor beam: I-beams; guardrail: 2 channels

Situated about three miles northeast of Dorchester, this bridge carries an unpaved north-south road across the West Fork of the Big Blue River. The roadway forms the east-west line between Sections 3 and 4 in Township 8N, Range 3E. Approached by four steel-stringer spans (three on the south, one on the north), the main span is a steel, five-panel, riveted Pratt pony truss, measuring 100 feet in length with an approximately 16-foot-wide roadway. Abutments and piers consist of I-beam piling. According to county records, the bridge was constructed in 1929 at a cost of $11,495.76 by Allied Contractors, Inc. of Omaha.

As stipulated by the Nebraska state legislature in 1913, the state engineer prepared a series of standardized bridge plans for compulsory use by the counties. Saline County used the standard, 100-foot, Pratt pony truss design for at least seven bridges, including this bridge. Documented construction dates range from 1918 to 1929. Although this design represented the longest span length developed for this type of pony truss, this fact is only marginally noteworthy. More significant, multiple-span examples of this truss type - such as the Lisco State Aid Bridge (1928) in Garden County and the Lewellen State Aid Bridge (1927) in Morrill County - remain in use, unaltered, over the Platte River in western Nebraska.

NAME(S) OF STRUCTURE
Big Blue River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C007613140; "Bridge S3/4, T8N, R3E," Saline County Bridge Record, located at Saline County Courthouse, Wilbur, Nebraska; **Tenth Biennial Report of the State Board of Irrigation, Highways and Drainage**, 1912-14, pp. 222-223; Standard bridge plans, microfiche, in Bridge Division, Nebraska Department of Roads; field inspection by Mary McCormick, 9 March 1989.

INVENTORIED BY
Mary McCormick, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Maryska Bridge
NDOR: C007613905

SALI18

DATE(S) OF CONSTRUCTION
ca.1925

LOCATION
county road over Turkey Creek; S29/30, T6N, R4E
2.2 miles southwest of Wilbur; Saline County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 17)

CONDITION
good

OWNER
Saline County

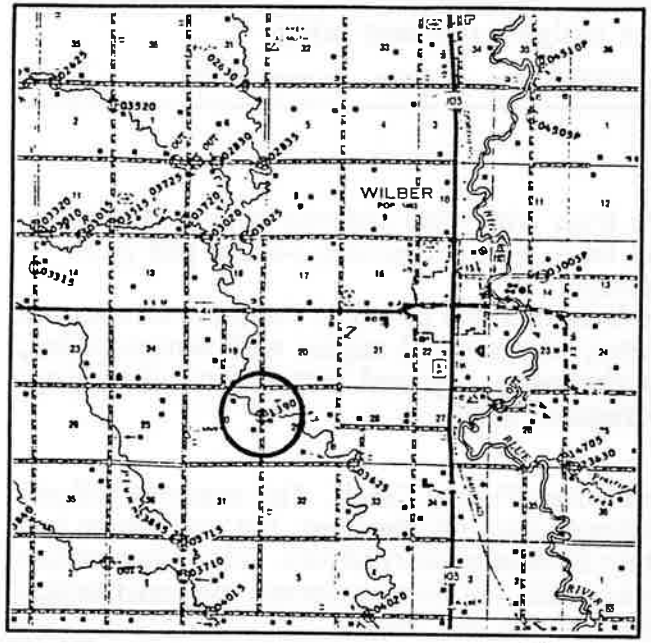
span number:	1	superstructure:	steel, 5-panel, rigid-connected Pratt through truss with steel stringer approach span
span length:	100.0'	substructure:	I-beam pile abutments with corrugated steel back- and wingwalls; I-beam pile pier
total length:	164.0'	floor/decking:	concrete on corrugated steel over I-beam stringers
roadway wdt.:	19.5'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 channels with batten plates; vertical: 2 channels with batten plates; diagonal: 2 angles with batten plates; portal bracing: pair angles; strut: built-up channels; top and bottom lateral bracing: angle; floor beam: I-beams; guardrail: corrugated steel

Located about two miles southwest of Wilbur, this bridge carries an unpaved north-south road across Turkey Creek. The roadway follows the line between Sections 29 and 30 in Township 6N, Range 4E. Approached by a steel-stringer span on the west, the main span is a steel, five-panel, riveted Pratt through truss, measuring 100 feet length with an approximately 20-foot-wide roadway. The substructure consists of I-beam piling. County records note that the repair of an earlier bridge at this site in 1923, but do not discuss the construction of the present bridge. Its design is compatible with standardized state-sponsored bridge plans of the late 1920s.

The lack of specific historical information concerning the bridge's construction detracts from its significance.

NAME(S) OF STRUCTURE
Maryska Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C007613905; "Bridge S29/30, T6N, R4E," Saline County Bridge Record, located at Saline County Courthouse, Wilbur, Nebraska; field inspection by Mary McCormick, 9 May 1989.

INVENTORIED BY
Mary McCormick, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Swan Creek Bridge
NDOR: C007614210

SALI19

DATE(S) OF CONSTRUCTION
1919

LOCATION
county road over North Fork of Swan Creek; S12/13, T5N, R2E
2.2 miles northeast of Western; Saline County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 28)

CONDITION
good

OWNER
Saline County

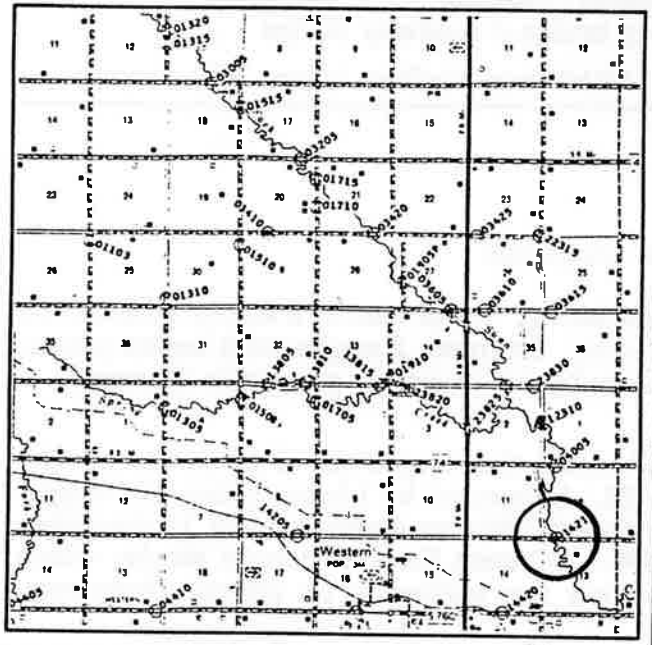
span number:	1	superstructure:	steel, 5-panel, rigid-connected Pratt pony
span length:	100.0'	substructure:	I-beam pile with corrugated steel back- and wingwalls
total length:	102.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	19.3'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 angles with batten plates; vertical: 2 pair angles with batten plates; diagonal: 2 angles with batten plates; lateral bracing: rods; strut: pair angles; floor beam: I-beams; guardrail: channels

Situated about two miles northeast of Western, this bridge carries an unpaved east-west road across the North Fork of Swan Creek. The roadway follows the north-south line between Sections 12 and 13 in Township 5N, Range 2E. Supported by I-beam piling, the single-span superstructure is a steel, five-panel, riveted Pratt pony truss, measuring 100 feet in length with an approximately 19-foot-wide roadway. County records indicate that the bridge was erected in 1919 for a cost of $11,496 by Omaha Steel Structural Works, which "installed [a] steel truss on concrete wings and backing." At an undetermined date, the truss was shifted to its present abutments. Remnants of the original concrete substructure are visible at the site.

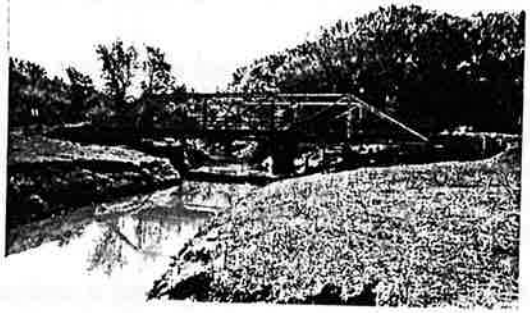
As stipulated by the Nebraska state legislature in 1913, the state engineer prepared a series of standardized bridge plans for compulsory use by the counties. Saline County used the standard, 100-foot, Pratt pony truss design for at least seven bridges, including this bridge. Documented construction dates range from 1918 to 1929. Although this design represented the longest span length developed for this type of pony truss, this fact is only marginally noteworthy. More significant, multiple-span examples of this truss type - such as the Lisco State Aid Bridge (1928) in Garden County and the Lewellen State Aid Bridge (1927) in Morrill County - remain in use, unaltered, over the Platte River in western Nebraska.

NAME(S) OF STRUCTURE
Swan Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C007614210; "Bridge S12/13 T5N, R2E," Saline County Bridge Record, located at Saline County Courthouse, Wilbur, Nebraska; field inspection by Mary McCormick, 9 May 1989; **Tenth Biennial Report of the State Board of Irrigation, Highways and Drainage**, 1912-14, pp. 222-223; Standard bridge plans, microfiche, in Bridge Division, Nebraska Department of Roads; field inspection by Mary McCormick, 10 May 1989.

INVENTORIED BY	**AFFILIATION**	**DATE**
Mary McCormick, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Swan Creek Bridge
NDOR: C007614820

SALI20

DATE(S) OF CONSTRUCTION
1929

LOCATION
county road over South Fork of Swan Creek; S25/36, T5N, R2E
3.1 miles southwest of Swanton; Saline County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 10)

CONDITION
good

OWNER
Saline County

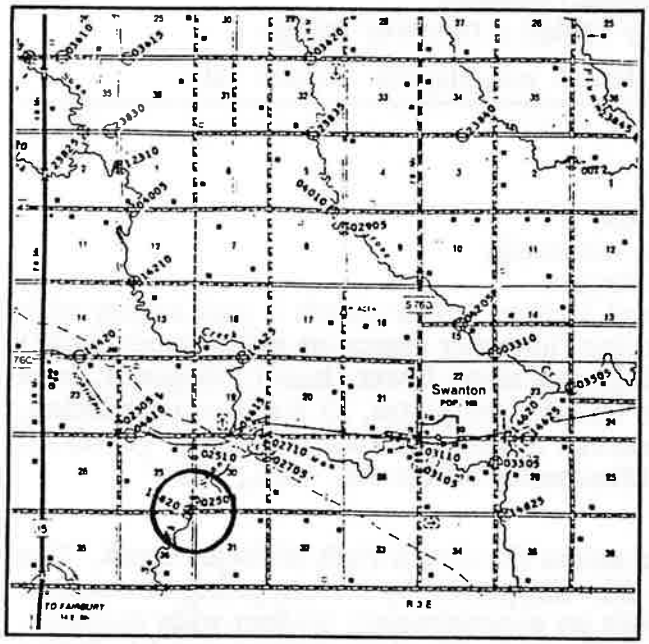
span number:	1	superstructure:	steel, 4-panel, rigid-connect Warren pony truss
span length:	60.0'	substructure:	I-beam pile with corrugated steel back- and wingwalls
total length:	62.0'	floor/decking:	concrete on corrugated steel over I-beam stringers
roadway wdt.:	23.8'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 pair angles with batten plates; vertical: 2 pair angles with lacing (intersect diagonals along upper chord) and 2 angles with batten plates (intersect diagonals along lower chord); diagonal: from ends of bridge to center are 1) 2 pair angles with batten plates, 2) 2 angles with lacing, and 3) 2 angles with batten plates; lateral bracing: angle; floor beam: I-beam; guardrail: 2 angles; bridge plaque: "**Mower County, Minnesota, Bridge No. 4871, 1929**"

Situated about 3 miles southwest of Swanton, this bridge carries an unpaved east-west road across the South Fork of Swan Creek. The roadway follows the north-south line between Sections 25 and 36 in Township 5N, Range 2E. Supported by I-beam piling abutments, the superstructure is a four-panel, riveted Warren pony truss, measuring 60 feet in length with an approximately 24-foot-wide roadway. According to an endpost plaque, the bridge was originally erected in Mower County, Minnesota in 1929. The date of its removal to Saline County, Nebraska has not been determined, but it probably occurred after World War II.

Because the bridge was originally built for another state's highway system, it lacks historical significance for Nebraska, especially since the historical circumstances of its relocation are unknown.

NAME(S) OF STRUCTURE
Swan Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C007614820; bridge plate; field inspection by Mary McCormick, 10 May 1989.

INVENTORIED BY
Mary McCormick, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Turkey Creek Bridge
NDOR: C007624445

SALI21

DATE(S) OF CONSTRUCTION
ca.1925

LOCATION
county highway over Turkey Creek Bridge; S14/23, T5N, R4E
0.5 mile west of Dewitt; Saline County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 22)

CONDITION
good

OWNER
Saline County

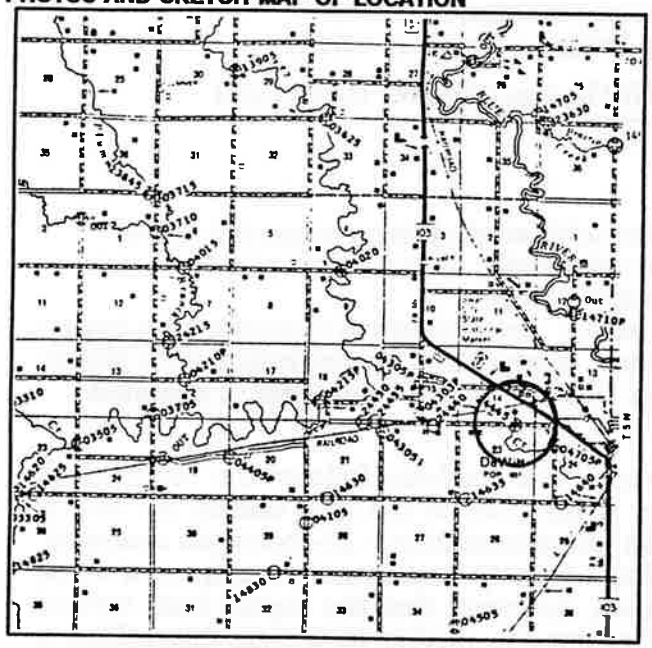
span number:	1	superstructure:	steel, 5-panel, rigid-connected Pratt pony truss with steel stringer approach spans
span length:	100.0'	substructure:	I-beam pile abutments with timber back- and wingwalls; steel/timber pile bent piers
total length:	289.0'	floor/decking:	corrugated steel with gravel surface over I-beam stringers
roadway wdt.:	19.6'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 channels with batten plates; vertical: 2 pair angles with batten plates; diagonal: 2 angles with batten plates; lateral bracing: rods; strut: steel plate; floor beam: I-beam; guardrail: 2 channels

Situated just west of Dewitt, this bridge carries an unpaved east-west road across Turkey Creek. The roadway follows the north-south line between Sections 14 and 23 in Township 5N, Range 4 E. Approached by six steel-stringer spans (five on the east, one on the west), the main span is a steel, five-panel, riveted Pratt pony truss measuring 100 feet in length with an approximately 20-foot-wide roadway. Except for a wood-pile pier under the east approach span, the substructure consists of steel piling. County records note repairs to a wood bridge at this site in 1918, but do not discuss the construction of the present bridge. It is known, however, that the county built several bridges of essentially the same design during the period 1918 to 1929. Consequently, it seems reasonable to assign this bridge a construction date of "ca.1925."

As stipulated by the Nebraska state legislature in 1913, the state engineer prepared a series of standardized bridge plans for compulsory use by the counties. Saline County used the standard, 100-foot, Pratt pony truss design for at least seven bridges, including this bridge. Documented construction dates range from 1918 to 1929. Although this design represented the longest span length developed for this type of pony truss, this fact is only marginally noteworthy. More significant, multiple-span examples of this truss type - such as the Lisco State Aid Bridge (1928) in Garden County and the Lewellen State Aid Bridge (1927) in Morrill County - remain in use, unaltered, over the Platte River in western Nebraska.

NAME(S) OF STRUCTURE
Turkey Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C007624445; "Bridge S14/23, T5N, R4E, located at Saline County Courthouse, Wilbur, Nebraska; **Tenth Biennial Report of the State Board of Irrigation, Highways and Drainage**, 1912-14, pp. 222-223; Standard bridge plans, microfiche, in Bridge Division, Nebraska Department of Roads; field inspection by Mary McCormick, 9 March 1989.

INVENTORIED BY
Mary McCormick, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Wood Avenue Bridge [Crete Bridge; Big Blue River Bridge] SALI22
NDOR: U062044305

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
Wood Avenue over the Big Blue River; S27/28, T8N, R4E
Crete; Saline County, Nebraska

USE (ORIGINAL / CURRENT)
city street bridge / city street bridge

RATING NRHP non-eligible (score: 22)

CONDITION
good

OWNER
Saline County

span number:	1	superstructure:	steel, 6-panel, pin-connected Pratt through truss
span length:	120.0'	substructure:	I-beam pile with timber back- and wingwalls
total length:	121.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.6'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: punched eyebars; vertical: 2 channels with lacing; diagonal: punched eyebars; counters: rods; portal bracing and strut: 2 pair angles; top and bottom lateral bracing: rods; floor beam: I-beams; guardrail: 2 pipes; walkway (west): timber with timber rail

The Wood Avenue Bridge carries a paved north-south road across the West Fork of the Big Blue River in Crete. Supported by I-beam piling, the superstructure is a steel six-panel, pin-connected Pratt through truss, measuring 120 feet in length with an approximately 16-foot-wide roadway. County records do not discuss the bridge's construction, but its design is compatible with standard plans prepared by the state engineer's office during the period 1913 to 1925. Consequently, it seems reasonable to assign a construction date of "ca.1915."

Although this bridge is representative of state-sponsored, standardized bridge construction in Nebraska, the lack of specific historical information concerning its design and construction detracts from its significance. The state contains better-documented examples of the truss type.

INVENTORIED BY
Mary McCormick, Renewable Technologies, Inc.

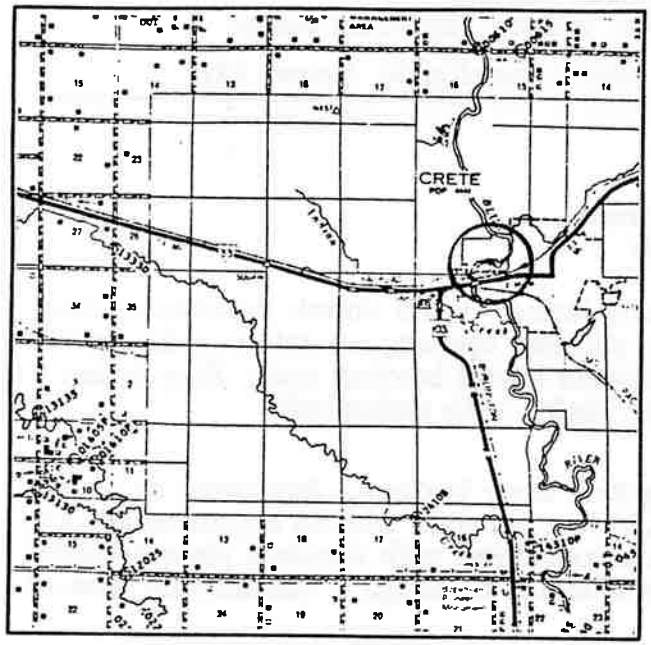
AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

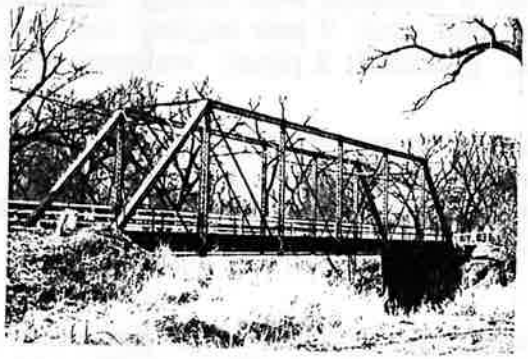
NAME(S) OF STRUCTURE

Wood Avenue Bridge [Crete Bridge; Big Blue River Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. U062044305; field inspection by Mary McCormick, 8 March 1989.

INVENTORIED BY

Mary McCormick, Renewable Technologies, Inc.

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Buffalo Creek Bridge [156th Street Bridge] SARP01
NDOR: C007701905

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over Buffalo Creek; S34/35, T13N, R11E
2.5 miles southwest of Springfield; Sarpy County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 30)

CONDITION
good

OWNER
Sarpy County

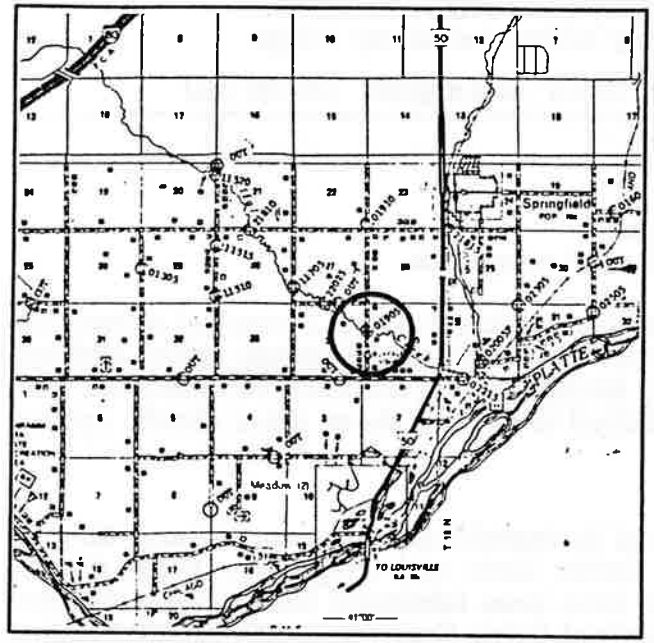
span number:	1	superstructure:	steel, 5-panel, pin-connected Pratt pony truss
span length:	90.0'	substructure:	steel pile bent abutments with timber back- and wingwalls
total length:	91.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	15.8'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 punched rectangular eyebars; vertical: 4 angles with batten plates and outriders; diagonal: paired eyebars; counter: 2 square eyebars with turnbuckles; lateral bracing: cross-braced round rods with threaded ends; floor beam: I-beam, field-bolted to vertical above lower chord; railing: 2 channels

This bridge carries a county road (156th Street) across Buffalo Creek, 2-1/2 miles southwest of Springfield, in southwestern Sarpy County. Built as a 5-panel pinned Pratt pony truss, the structure rests on steel pile bents with timber back- and wingwalls. Sarpy County Commissioners' records do not typically refer to specific bridges, but this truss appears to have been fabricated from a state standard design ca.1910. County records do reveal that Charles G. Thompson, of Springfield NE received Sarpy County's annual bridge building contracts between 1903 and the late 1910s. This bridge is likely one of dozens of pony trusses erected by Thompson in the county during these years. The Buffalo Creek Bridge is undistinguished as a typically configured example of a common structural type.

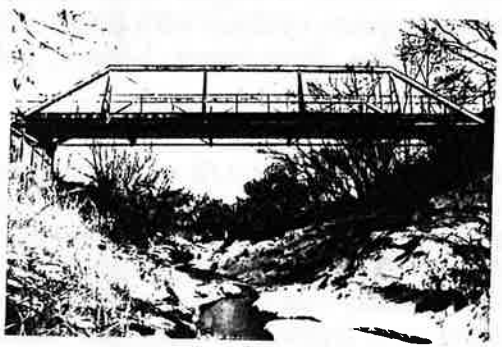
NAME(S) OF STRUCTURE

Buffalo Creek Bridge [156th Street Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C007701905; Sarpy County Commissioners' Record, Books 5-7, covering period 1900 to 1920; field inspection by Carl McWilliams and Richard Collier, 21 January 1991.

INVENTORIED BY

Carl W. McWilliams

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C007702405P

SARP02

DATE(S) OF CONSTRUCTION
1910

LOCATION
county road over intermittent stream; S11, T12N, R10E
8.5 miles southwest of Springfield; Sarpy County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 31)

CONDITION
good

OWNER
Sarpy County

span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt half-hip pony truss
span length:	58.0'	substructure:	steel pile bent abutments with timber backwalls
total length:	60.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	15.8'	other features:	upper chord: 2 channels with cover plate and batten plates; lower chord: 2 punched rectangular eyebars; vertical: 4 angles with batten plates; diagonal: 2 looped eyebars; counter: 2 square eyebars with turnbuckles; lateral: cross-braced round rods with threaded ends; floor beam: I-beam, U-bolted to lower chord pin at vertical; railing: 2 channels; endpost-mounted builder's plate: **Erected By Chas. Thompson 1910 Commissioners Chris Thiessen Jacob Sass J.G. Pflug**

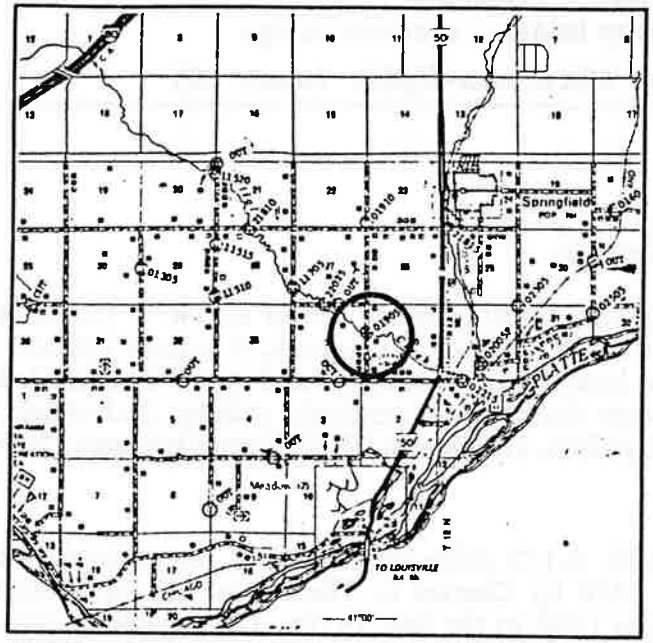
This small-scale bridge crosses over an intermittent watercourse in Section 11, T12N, R10E, 8-1/2 miles southwest of Springfield. As indicated by a builder's plate on the bridge itself, this pinned pony truss was erected in 1910 by Charles G. Thompson. From nearby Springfield, Thompson held Sarpy County's bridge building contracts on an annual basis from 1903 to the late 1910s. During this period, Thompson erected dozens of these modest pony trusses. For this particular crossing, he contractor obtained steel from the Inland mills in East Chicago, Indiana, and built a 4-panel Pratt half-hip pony truss. Since its completion, the bridge has carried vehicular traffic in essentially unaltered condition. This bridge is undistinguished as a typically configured example of a common structural type.

Marketed extensively by virtually all of the in-state bridge contractors and promoted in the form of standardized designs by the Nebraska State Engineer's office, the pinned Pratt pony truss was used widely by Nebraska's counties to carry roads over the state's myriad small streams. Thousands of such small-scale structures were erected throughout the state during the early 1900s, and many remain in use today. This bridge is a typically configured example of this exceedingly common vehicular truss type.

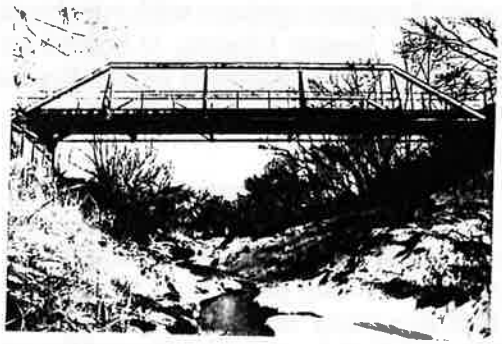
NAME(S) OF STRUCTURE

Buffalo Creek Bridge [156th Street Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C007701905; Sarpy County Commissioners' Record, Books 5-7, covering period 1900 to 1920; field inspection by Carl McWilliams and Richard Collier, 21 January 1991.

INVENTORIED BY

Carl W. McWilliams

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Big Papillion Creek Bridge
NDOR: C007704305P

SARP03

DATE(S) OF CONSTRUCTION
ca.1905

LOCATION
county road over Big Papillion Creek; S11/14, T13N, R13E
2.8 miles south of Bellevue ; Sarpy County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 23)

CONDITION
good

OWNER
Sarpy County

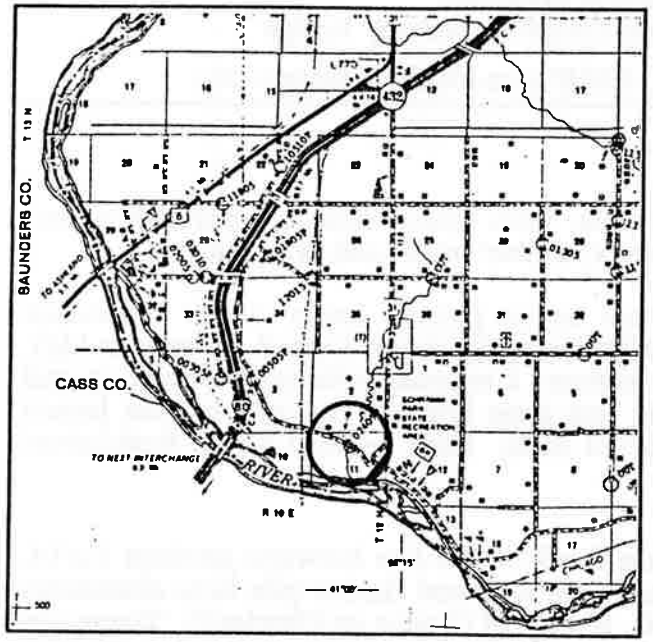
span number: 1
span length: 80.0'
total length: 250.0'
roadway wdt.: 14.9'

superstructure: steel, 5-panel, pin-connected Pratt through truss, with timber stringer approach spans
substructure: steel and timber pile bent piers and abutments; timber back- and wingwalls
floor/decking: timber deck over timber stringers
other features: upper chord: 2 channels with cover plate and batten plates; lower chord: 2 punched rectangular eyebars; vertical: 2 channels with lacing (2 round looped eyebars at hip); diagonal: 2 punched rectangular eyebars; counter: 2 eyerods with turnbuckles; portal and overhead bracing: 4 angles with lacing and knee braces; top and bottom lateral bracing: cross-braced round rods with threaded ends; floor beam: I-beam, field-bolted to vertical; railing: 2 steel pipes

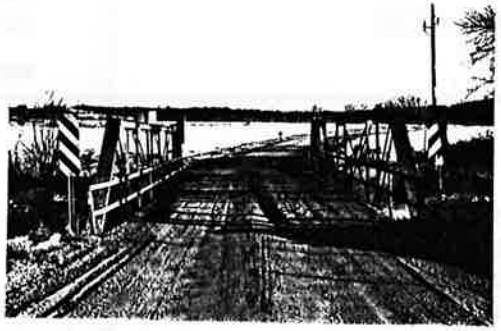
Located just south of Offutt Air Force Base, this bridge carries a county road over Big Papillion Creek on the line between sections 11/14, T13N, R13E. The structure consists of a 5-panel, pin-connected Pratt through truss, supported by steel and timber pile bent abutments and piers. The bridge probably dates to about 1905 and was likely built either by Charles G. Sheely of Omaha or Charles G. Thompson of nearby Springfield. Sheely held the annual contract to build Sarpy County's steel bridges between 1900 and 1903. Following Sheely's relatively brief tenure, Thompson received the county's bridge building contract for the next several years, until the late 1910s. The bridge has an 80-foot main span, that combines with a total of eight timber stringer approach spans for an overall structure length of 250 feet. Five approach spans, located on the south end, form a tightly curved approach to the bridge. With its construction history largely undocumented, the Big Papillion Creek Bridge is undistinguished as a typical example of a common structural type in Nebraska.

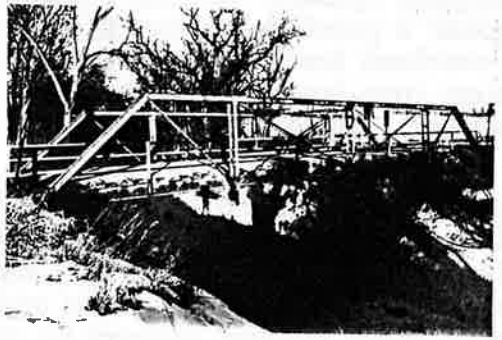
NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C007702405P; builder's plate on bridge; Sarpy County Commissioners' Record, Books 5-7, covering period 1900 to 1920; field inspection by Carl McWilliams and Richard Collier, 21 January 1991.

INVENTORIED BY
Carl W. McWilliams

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
252nd Street Bridge SARP04
NDOR: C007710305

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
252nd St. over channel between Platte and Elkhorn Rivers; S20/21, T14N, R10E
3.7 miles northwest of Gretna; Sarpy County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 23)

CONDITION
good

OWNER
Sarpy County

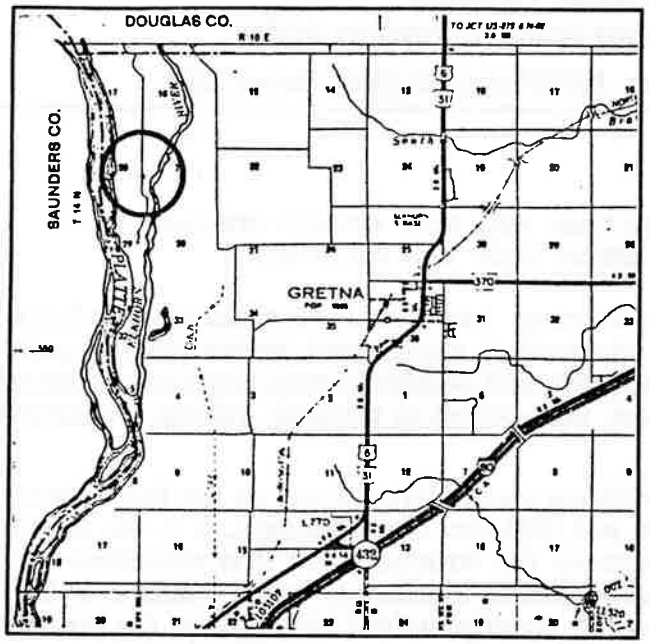
span number: 1
span length: 120.0'
total length: 220.0'
roadway wdt.: 14.9'

superstructure: steel, 7-panel, pin-connected Pratt through truss with steel stringer approach spans
substructure: steel pile bent piers and abutments with timber back- and wingwalls
floor/decking: timber deck over steel stringers
other features: upper chord: 2 channels with cover plate and lacing; lower chord: 2 channels with batten plates; vertical: 2 channels with lacing; diagonal: 2 angles with batten plates; portal strut: A-frame; intermediate strut: 2 angles; top and bottom lateral: cross-braced round rod with threaded ends; floor beam: I-beam, field-bolted to vertical; railing: 2 channels

This medium-span truss carries a county road (252nd Street) across a channel between the Elkhorn and Platte Rivers on the line between Sections 20/21, T14N, R10E, in Sarpy County's northwest corner. With its 120-foot span and 220-foot overall length, it is the longest pinned through truss remaining in Sarpy County. County records do not specifically reference the structure, but it is consistent with bridge construction from about 1910. Charles G. Thompson of nearby Springfield was Sarpy County's principal bridge contractor from 1903 to the late 1910s, and was likely to have constructed this bridge. Thompson, however, usually limited his work to the erection of smaller pony trusses, and it is possible that the county contracted with a larger firm to build this through truss. The bridge appears to have retained its historical integrity, having undergone only minor alterations over the years. Located over a minor waterway and largely undocumented, the 252nd Street Bridge appears to lack a great degree of historical or technological significance.

NAME(S) OF STRUCTURE
252nd Street Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C007710305; Sarpy County Commissioners' Record, Books 5-7, covering period 1900 to 1920; field inspection by Carl McWilliams and Richard Collier, 21 January 1991.

INVENTORIED BY
Carl W. McWilliams

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Cornhusker Road Bridge
NDOR: C007710605P

SARP05

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
Cornhusker Road over intermittent stream; S19/30, T14N, R11E
1.8 miles northeast of Gretna; Sarpy County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 29)

CONDITION
good

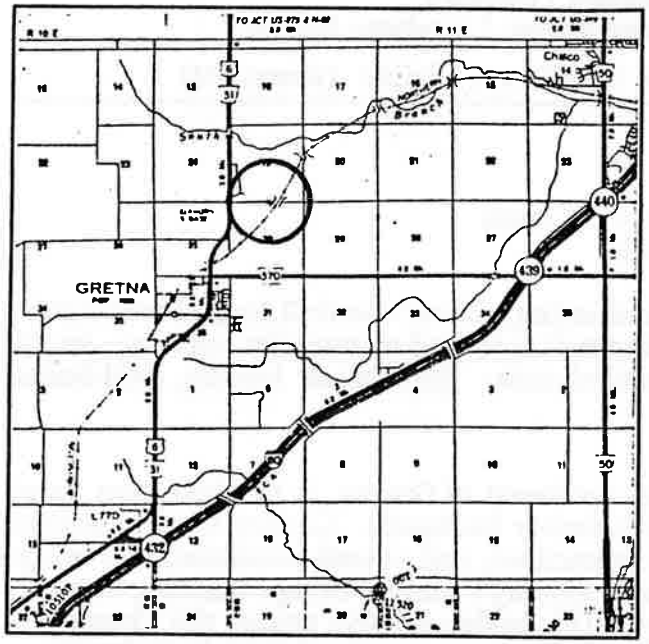
OWNER
Sarpy County

span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt half-hip pony truss
span length:	40.0'	substructure:	timber pile abutments with timber backwalls
total length:	41.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	15.0'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 looped rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 looped rectangular eyebars; lateral bracing: cross-braced round rods with threaded ends; floor beam: I-beam, field-bolted to verticals; railing: 2 channels

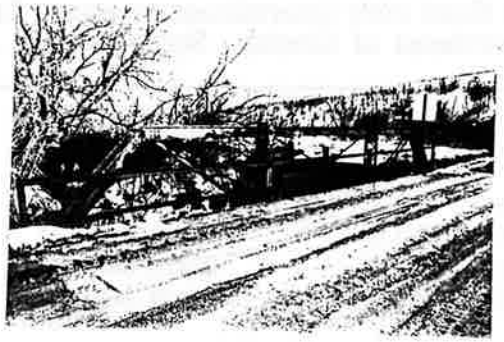
This small-scale structure carries Cornhusker Road across a small stream, just under 2 miles northeast of Gretna, in northwestern Sarpy County. Built as a pinned Pratt half-hip pony truss, the structure rests on timber piles with timber backwalls. County Commissioners' records typically do not refer to specific crossings, but based on its half-hip design, pinned connections, and overall condition, this bridge was probably built about 1910. Charles G. Thompson of Springfield, Nebraska, held Sarpy County's annual bridge building contract between 1903 and the late 1910s, building numerous pony trusses over various watercourses. This bridge is likely among the Thompson-built structures dating from that period. It is a typically configured example of an exceedingly common structural type in Nebraska.

NAME(S) OF STRUCTURE
Cornhusker Road Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Structure Inventory and Appraisal, Sarpy County Structure No. C007710605P; Sarpy County Commissioners' Record, Books 5-7, covering period 1900 to 1920; field inspection, 21 January 1991.

INVENTORIED BY
Carl W. McWilliams

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Big Papillion Creek Bridge [120th Street Bridge] SARP06
NDOR: C007712515

DATE(S) OF CONSTRUCTION
ca.1940

LOCATION
120th Street over South Branch of Big Papillion Creek; S19/20, T14N, R12E
3.2 miles west of La Vista ; Sarpy County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 40)

CONDITION
good

OWNER
Sarpy County

span number:	1	superstructure:	steel, 6-panel, welded/bolted, tied arch pony truss with steel stringer approach spans
span length:	80.0'	substructure:	steel pile bent piers and abutments with timber back- and wingwalls
total length:	142.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	15.1'	other features:	arch rib: 2 channels with welded lacing; lower chord: 2 rectangular bars with welded lacing; vertical: I-beam welded/bolted to arch ribs; lateral bracing: cross braced angles; floor beam: I-beam; railing: 2 channels

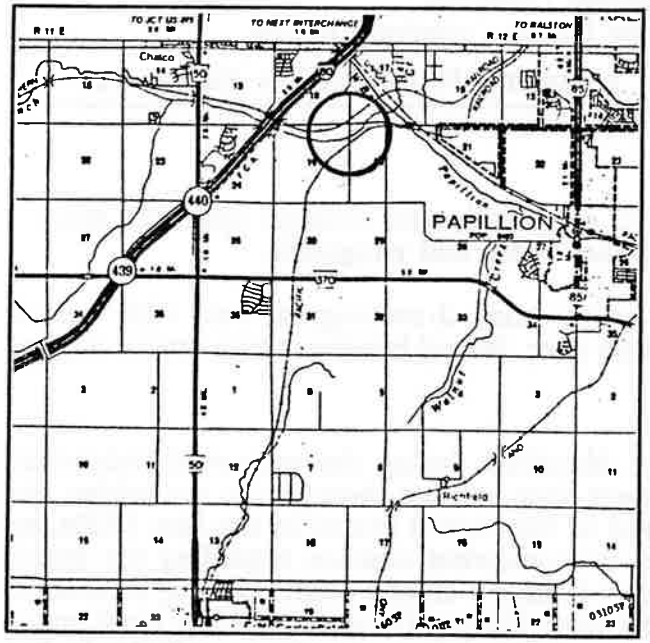
With its combined welded/bolted tied arch design, this bridge is the only one of its type identified during the course of Nebraska's statewide bridge inventory. Physical evidence indicates that the structure's components were shop welded, brought to the bridge site in sections, and then bolted together in the field. Welded bridge construction first appeared in the United States in the late 1920s, so this bridge was almost assuredly built sometime after that date. County records, though, are somewhat obscure regarding the span's construction history. The Monarch Engineering Company of Falls City, Nebraska was Sarpy County's chief bridge building contractor during the 1920s and 1930s, and may be responsible for erecting this distinctive bridge. Following Monarch's tenure, county work crews were employed to erect county bridges, so it is also conceivable that the bridge was built using county labor. Another possibility is that this bridge is attributable to the Thomas Construction Company. Apparently based locally, Thomas Construction was active in Sarpy County bridge construction and repair from the 1940s through the 1960s. Whenever this bridge may have been built, it was not the first steel bridge at its location. On July 15, 1903, C.G. Sheely was awarded a contract to build several Sarpy County bridges, including a steel span on the line between sections 19/20, T14N, R12E.

The Big Papillion Creek Bridge combines elements that are both innovative and anachronistic. Its arched configuration resembles an updated version of the venerable bowstring arch-truss built on eastern Nebraska roads in the 1870s, 1880s and early 1890s. Its extensive use of welded connections at a time in which welding technology was in its formative stages, however, marks the bridge as a sophisticated design exercise. Like the Hastings Subway (ADAM05), the Big Papillion Bridge is one of Nebraska's earliest extant examples of welded bridge construction.

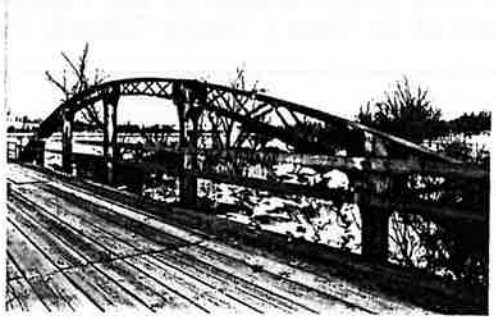
NAME(S) OF STRUCTURE

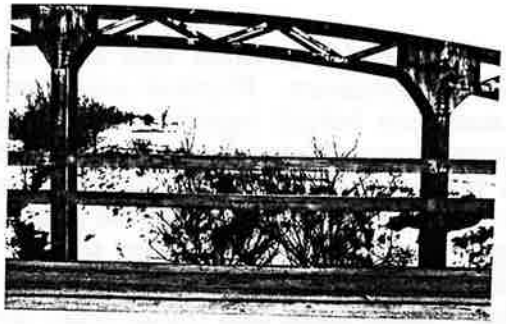
Big Papillion Creek Bridge [120th Street Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C007712515; Sarpy County Commissioners' Record, Books 5-7, covering period 1900 to 1920, (see specifically, Book 5, page 338, 15 July 1903); County Commissioners' Record, Book 9, covering period 1934-1939; field inspection by Carl McWilliams and Richard Collier, 21 January 1991.

INVENTORIED BY

Carl W. McWilliams

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
U.S. Highway 6 Bridge
NDOR: S006 34238

SARP07

DATE(S) OF CONSTRUCTION
1944

LOCATION
U.S. Highway 6 over stream; S21, T13N, R10E
8.3 miles west of Springfield; Sarpy County, Nebraska

USE (ORIGINAL / CURRENT)
highway bridge / highway bridge

RATING NRHP non-eligible (score: 32)

CONDITION
excellent

OWNER
Sarpy County

span number:	7	superstructure:	continuous concrete slab
span length:	33.0'	substructure:	timber piles with concrete caps
total length:	178.0'	floor/decking:	asphalt over concrete deck
roadway wdt.:	26.0'	other features:	concrete guardrails

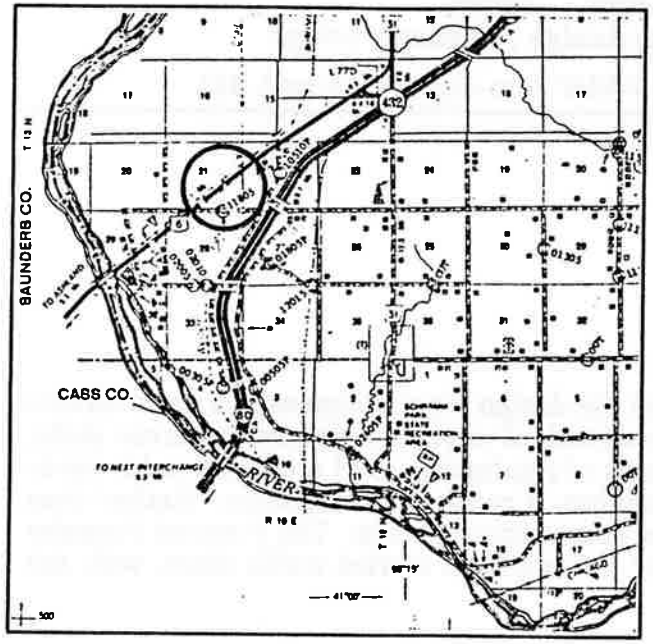
In September 1944, engineers for the Nebraska Department of Roads and Irrigation completed the design for a bridge over a small stream some eight miles west of Springfield on U.S. Highway 6. As designed, the structure consisted of seven reinforced concrete slabs, supported by timber pile abutments and piers. The bridge was modest, requiring 21,215 pounds of reinforcing steel and 1518 cubic yards of concrete. When the department let Project WER-1-A(1) for competitive bids later in September, it received no response. Rather than rebid the project, the department evidently undertook the construction as a state project, using force account labor. The Fremont Foundry and Machine Company fabricated the steel guardrails. Completed in 1945, the U.S. Highway 6 Bridge has carried traffic since, with the removal of its steel guardrails in 1951 as the only alteration of note.

As World War II continued into 1944 and 1945, the Nebraska Department of Roads and Irrigation was forced to restrict its construction activities. "The Priorities Critical List and Construction Limitations were in full force and effect during this biennium [1943-44]," the department reported in 1944, "and as a result bridge and culvert construction was limited to the structures classified as emergency construction or those located on access roads to military installations." During the biennium, the department built only nineteen structures, four of which were concrete slabs. This modest bridge was indicative of the severe limitations on materials use caused by war shortages. It is otherwise an unremarkable structure, made up of multiple short-span concrete slabs of the type developed by the department over a decade before.

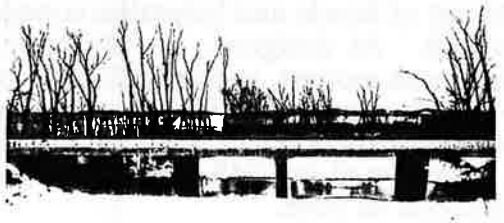
NAME(S) OF STRUCTURE

U.S. Highway 6 Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number S006 34238; Nebraska Department of Roads and Irrigation, **Twenty-Fifth Biennial Report**, 1943-44, pages 60, 86-87; "Continuous Concrete Slab Bridge," original construction drawings by Nebraska Bureau of highways, 23 September 1944, located at Nebraska Department of Roads, Lincoln, Nebraska; field inspection by Carl McWilliams and Richard Collier, 21 January 1991.

INVENTORIED BY

Carl W. McWilliams

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Duck Creek Bridge
NDOR: C007801830

SAUN01

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
township road over Duck Creek; S27/34, T16N, R6E
4.2 miles northeast of Prague; Saunders County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 27)

CONDITION
good

OWNER
Saunders County

span number: 1
span length: 70.0'
total length: 70.0'
roadway wdt.: 15.5'

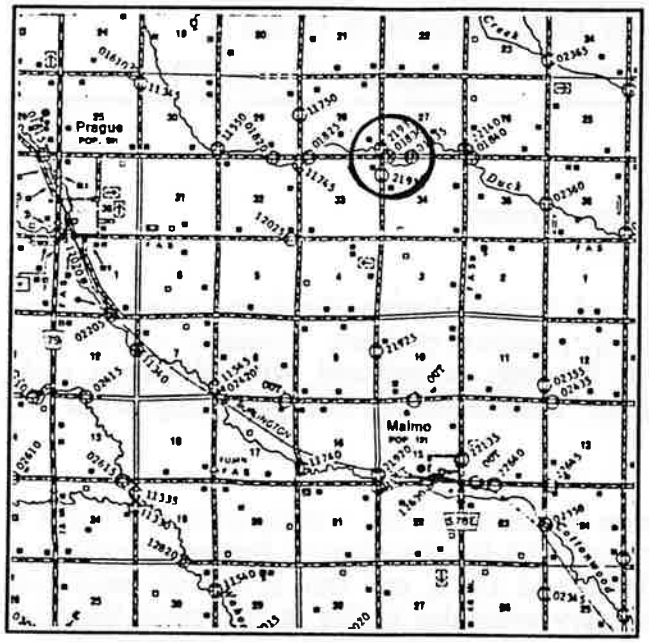
superstructure: steel, 4-panel, pin-connected Pratt half-hip pony truss
substructure: timber piles with timber back- and wingwalls
floor/decking: timber deck over I-beam stringers
other features: upper chord: 2 channels with cover plate and lacing; lower chord: punched eyebars; vertical: 2 pair angles with lacing; diagonal: punched eyebars; counter: eyerod with turnbuckle; floor beam: I-beams; lateral bracing: round rod with threaded ends; guardrail: 2 angles; hip block builder's plate: **Canton Bridge Company** (top of all four end posts)

This small-scale truss carries a secondary county road over Duck Creek on the line between Sections 27/34, T16N, R6E, northeast of Prague. Configured as a pin-connected Pratt half-hip pony truss, the bridge was built circa 1910 by the Canton Bridge Company of Canton, Ohio. Canton held Saunders County's annual bridge building contract between 1905 and 1915, and this is one of many such spans built by the firm during this period. Since its completion, the bridge has served to carry vehicular traffic in this rural Saunders County location.

The Canton Bridge Company dominated bridge work in Saunders County from at least 1906 to 1913, holding the county's annual bridge construction contracts for successive years. In response to what they considered exorbitant unit-price bids submitted at the 1914 annual contract letting, the county commissioners decided to purchase all materials and construct bridges using local, force account labor. Saunders County stayed in the bridge business in 1914 and 1915, but in 1916 it returned again to the system of annual unit-price agreements, awarding that year's contract to the Wilson Re-enforced Concrete Company of Wahoo (the Saunders County seat). The Central Bridge and Construction Company, also based in Wahoo, dominated much of the county's bridge construction in the 1920s and 1930s. The Duck Creek Bridge typifies the type of small-span trusses erected by the Canton Bridge Company in Saunders County - and throughout Nebraska - in the early 1900s.

NAME(S) OF STRUCTURE
Duck Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C007801830; Saunders County Commissioners' Record, Books 6 - 8, covering the period 1905 to 1916, on file in the Saunders County Courthouse, Wahoo, NE; Saunders County Bridge Record, (three volumes containing bridge inspection reports from 1916, 1928, and 1932-1933), on file in the office of the Saunders County Highway Superintendent, Wahoo, NE; builder's plate on bridge; field inspection by Mary McCormick, 12 May 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Duck Creek Bridge
NDOR: C007801835

SAUN02

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
township road over Duck Creek; S27/34, T16N, R6E
4.5 miles northeast of Prague; Saunders County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 27)

CONDITION
good

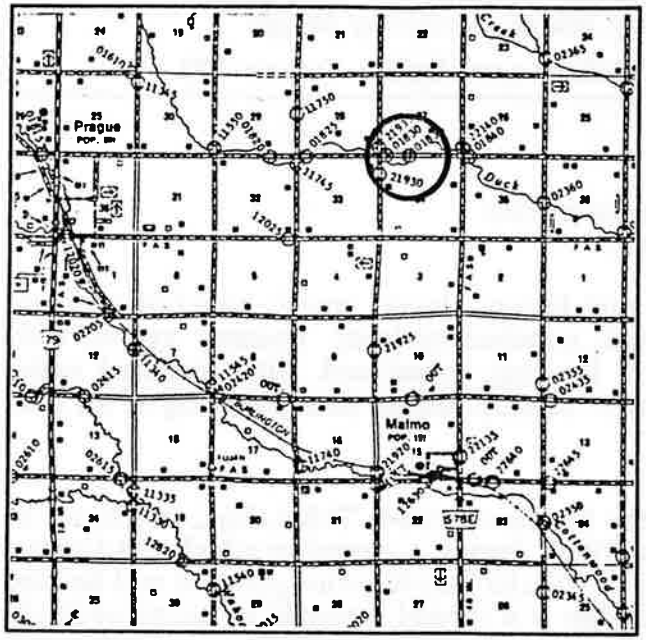
OWNER
Saunders County

span number:	1	superstructure:	steel, 5-panel, pin-connected Pratt half-hip pony truss
span length:	70.0'	substructure:	timber piles with timber back- and wingwalls
total length:	70.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	16.8'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: punched eyebars; vertical: 2 pair angles with lacing; diagonal: punched eyebars; counter: eyerod with turnbuckle; floor beam: I-beams; lateral bracing: round rod with threaded ends; guardrail: 2 angles; hip block builder's plate: **Canton Bridge Company** (top of all four end posts)

This small-scale truss carries a secondary county road over Duck Creek on the line between Sections 27/34, T16N, R6E, northeast of Prague. Configured as a pin-connected Pratt half-hip pony truss, the bridge was built circa 1910, during a period in which the Canton Bridge Company of Canton, Ohio, held Saunders County's annual bridge construction contracts. With its half-hip configuration and details, this small-scale truss bears the earmarks of a Canton design. Essentially unaltered, this bridge is a typical example of an exceedingly common structural type in Nebraska.

NAME(S) OF STRUCTURE
Duck Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C007801835; Saunders County Commissioners' Record, Books 6 - 8, covering the period 1905 to 1916, on file in the Saunders County Courthouse, Wahoo, NE; Saunders County Bridge Record, (three volumes containing bridge inspection reports from 1916, 1928, and 1932-1933), on file in the office of the Saunders County Highway Superintendent, Wahoo, NE; field inspection by Mary McCormick, 10 May 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C007802105

SAUN03

DATE(S) OF CONSTRUCTION
ca.1925

LOCATION
township road over unnamed stream; S34/35, T13N, R6E
3.5 miles west of Ceresco; Saunders County, Nebraska

USE (ORIGINAL / CURRENT)
highway bridge / roadway bridge

RATING NRHP non-eligible (score: 5)

CONDITION
good

OWNER
Saunders County

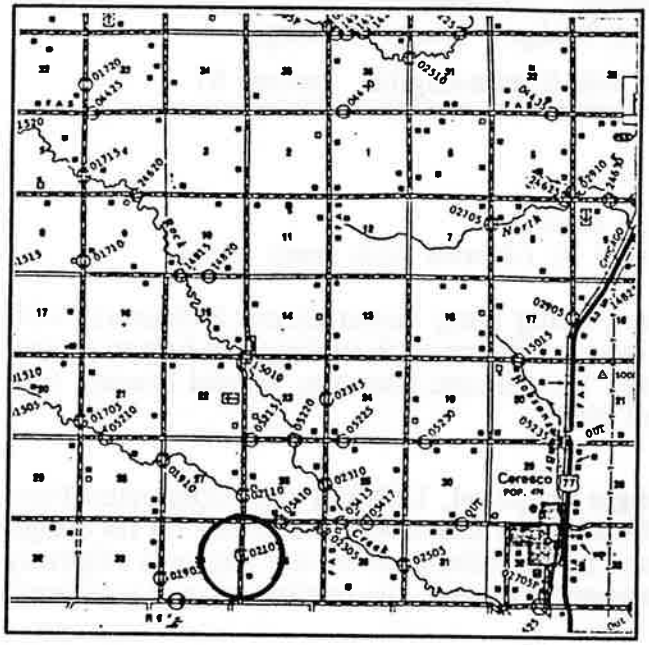
span number: 1
span length: 120.0'
total length: 122.0'
roadway wdt.: 20.9'

superstructure: steel, 6-panel, rigid-connected Pratt through truss
substructure: concrete abutments with wingwalls supported by I-beams with sheet piling
floor/decking: concrete deck over I-beam stringers
other features: upper chord: 2 channels with cover plate and lacing bars; lower chord: 2 channels with batten plates; vertical: 2 pair angles with lacing; diagonal: 2 angles with batten plates; strut: 2 angles; portal: 2 angles with lacing; floor beam: I-beams; lateral bracing (top and bottom): angles; guardrail: corrugated steel

Located 3-1/2 miles west of Ceresco, this bridge over an unnamed stream consists of a single six-panel, 120-foot rigid-connected Pratt through truss supported by H-pile steel bent abutments. The truss's date of erection and builder are unknown, but based on its design attributes, the bridge appears to have been built in the mid-1920s in Missouri from standard plans delineated by the Missouri Highway Department and moved at a later date to this location. Thus built in another state and subsequently moved, the contextual and locational integrity of this bridge are severely compromised.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C007802105; Saunders County Commissioners' Record, Book 9, covering the period 1923 to 1929, on file in the Saunders County Courthouse, Wahoo, NE; Saunders County Bridge Record, (three volumes containing bridge inspection reports from 1916, 1928, and 1932-1933), on file in the office of the Saunders County Highway Superintendent, Wahoo, NE; field inspection by Mary McCormick, 19 May 1989.

INVENTORIED BY	AFFILIATION	DATE
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Cottonwood Creek Bridge
NDOR: C07802205

SAUN04

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
township road over Cottonwood Creek Bridge; S1/2, T15N, R5E
1.0 mile south of Prague; Saunders County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 19)

CONDITION
good

OWNER
Saunders County

span number: 1
span length: 120.0'
total length: 120.0'
roadway wdt.: 15.7'

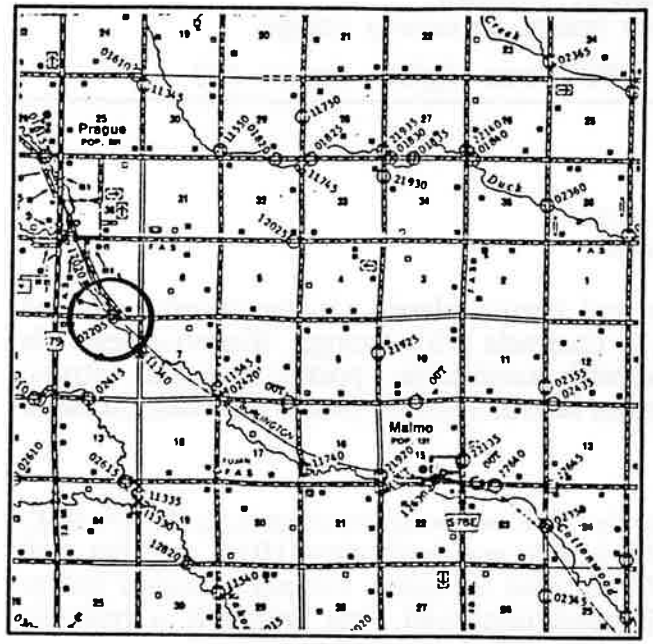
superstructure: steel, 7-panel, pin-connected Pratt through truss
substructure: I-beam piles with timber back- and wingwalls
floor/decking: timber deck over I-beam stringers
other features: upper chord: 2 channels with cover plate and batten plates; lower chord: punched eyebars; vertical: punched eyebars (hip), 2 channels with lacing; diagonal: eyerods (center), punched eyebars; counter: eyerod with turnbuckle; portal: 2 angles; struts: 2 angles; floor beam: I-beams; top and bottom lateral bracing: round rod with threaded ends; guardrail: 2 angles

This medium-span through truss carries a secondary county road over Cottonwood Creek on the line between Sections 1/2, T15N, R5E, a mile south of Prague. Configured as a seven-panel, pin-connected Pratt through truss, the bridge was built circa 1910, and fits well within the technological trends of the period. The Canton Bridge Company of Canton, Ohio, held Saunders County's annual bridge building contract between 1905 and 1915 and may have erected this through truss. Though unaltered, this bridge is a typically configured example of a common vehicular truss type in Nebraska.

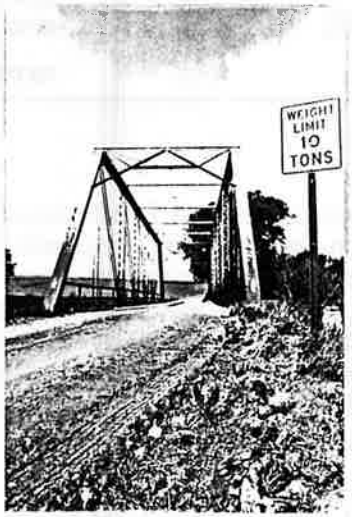
NAME(S) OF STRUCTURE

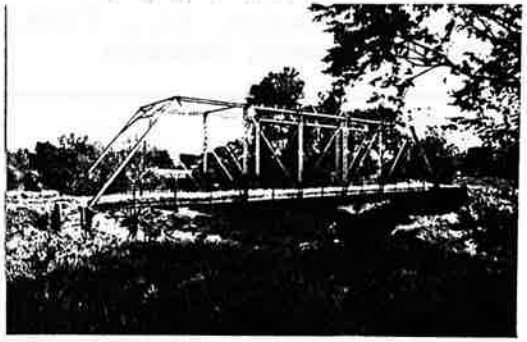
Cottonwood Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C007802205; Saunders County Commissioners' Record, Books 6 - 8, covering the period 1905 to 1916, on file in the Saunders County Courthouse, Wahoo, NE; Saunders County Bridge Record, (three volumes containing bridge inspection reports from 1916, 1928, and 1932-1933), on file in the office of the Saunders County Highway Superintendent, Wahoo, NE; field inspection by Mary McCormick, 19 May 1989.

INVENTORIED BY

Lon Johnson, Renewable Technologies, Inc.

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Hunters Slough Bridge
NDOR: C007803610

SAUN05

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
township road over Hunters Slough Creek; S8/17, T14N, R5E
8.0 miles southwest of Prague; Saunders County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 22)

CONDITION
good

OWNER
Saunders County

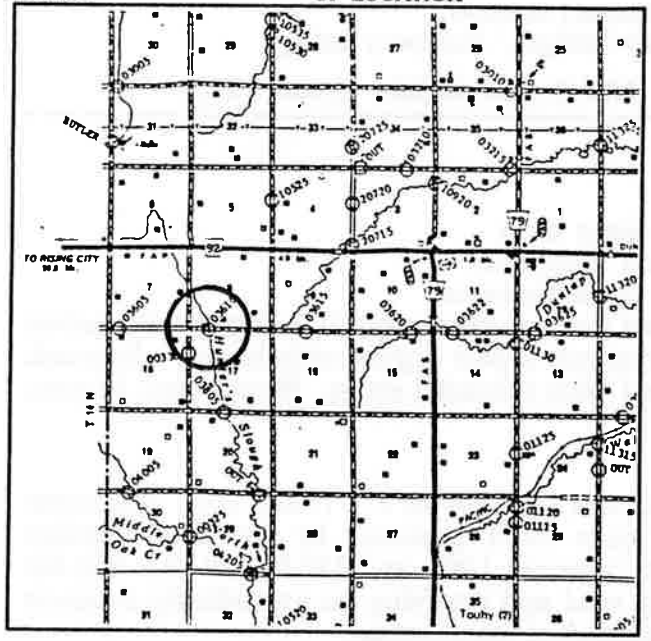
span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt half-hip pony truss
span length:	50.0'	substructure:	timber pile abutments with timber back- and wingwalls
total length:	51.0'	floor/decking:	corrugated steel with gravel surface over I-beam stringers
roadway wdt.:	15.4'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 angles with batten plates except punched eyebars at center; vertical: 2 pair angles with lacing; diagonal: punched eyebars; lateral bracing: round rod with threaded ends; floor beam: I-beam; guardrail: 2 angles

This small-scale truss carries a secondary county road over Hunters Slough on the line between Sections 8/17, T14N, R5E, southwest of Prague. Configured as a pin-connected Pratt half-hip pony truss, the bridge was built circa 1910, probably by the Canton Bridge Company of Canton, Ohio. Canton held Saunders County's annual bridge building contracts between 1905 and 1915, and this half-hip pony truss displays the earmarks of a Canton-built structure. Located on a secondary county road and typifying an exceedingly common structural type, the Hunters Slough Bridge lacks any appreciable level of historical or technological significance.

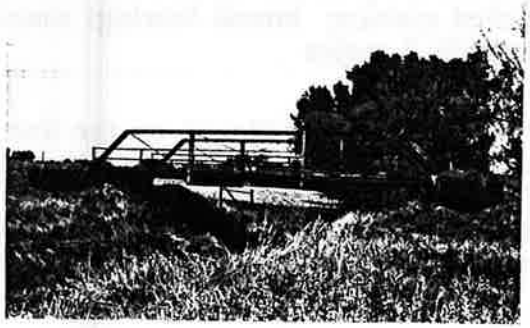
NAME(S) OF STRUCTURE

Hunters Slough Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C007803610; Saunders County Commissioners' Record, Books 6 - 8, covering the period 1905 to 1916, on file in the Saunders County Courthouse, Wahoo, NE; Saunders County Bridge Record, (three volumes containing bridge inspection reports from 1916, 1928, and 1932-1933), on file in the office of the Saunders County Highway Superintendent, Wahoo, NE; field inspection by Mary McCormick, 19 May 1989.

INVENTORIED BY

Lon Johnson, Renewable Technologies, Inc.

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Wahoo Creek Bridge
NDOR: C007804115

SAUN06

DATE(S) OF CONSTRUCTION
ca.1935

LOCATION
township road over Wahoo Creek; S33/34, T14N, R8E
1.5 miles southeast of Ithaca; Saunders County, Nebraska

USE (ORIGINAL / CURRENT)
highway bridge / roadway bridge

RATING NRHP non-eligible (score: 14)

CONDITION
good

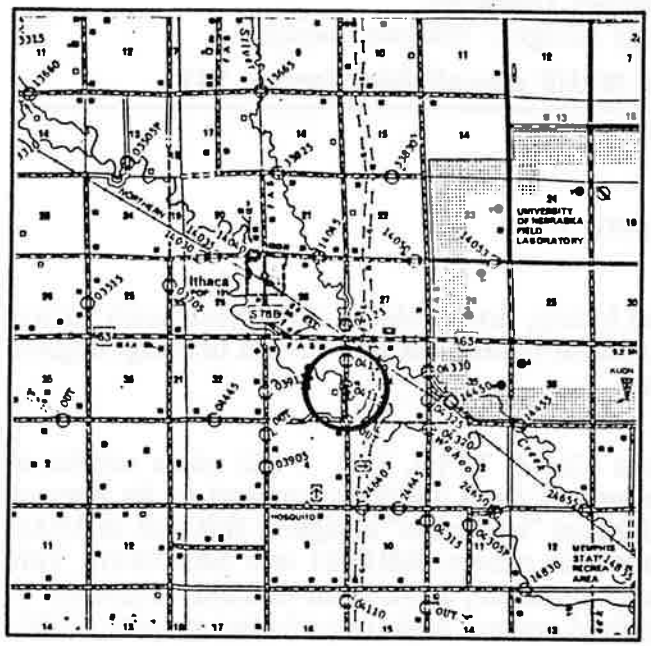
OWNER
Saunders County

span number:	1	superstructure:	steel, 5-panel, rigid-connected Camelback pony truss
span length:	100.0'	substructure:	concrete abutments and wingwalls
total length:	104.0'	floor/decking:	concrete deck over I-beam stringers
roadway wdt.:	25.0'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 channels with batten plates; vertical: I-beams; diagonal: I-beams; floor beam: I-beam; lateral bracing: angles; strut: pair angles; guardrail: small I-beams

This bridge carries a secondary county road over Wahoo Creek on the line between Sections 33/34, T14N, R8E, 1-1/2 miles southeast of Ithaca. Configured as a rigid-connected Camelback pony truss, the bridge was built elsewhere circa 1925 and moved to its present site sometime after 1933. An entry in the county bridge book refers to the inspection of a 70-foot "low truss" bridge at this site in 1933. Evidently moved here after that date, this is one of at least three such bridges in the county (the others: **SAUN11** and **SAUN14**). This Camelback pony is not a standard plan of Nebraska's Bureau of Roads and Bridges. It may, therefore, have been erected originally in another state and subsequently moved to this site. (Saunders County is known to have acquired several such out-of-state trusses.) With its construction history undocumented, the Wahoo Creek Bridge has only marginal integrity and interpretive value.

NAME(S) OF STRUCTURE
Wahoo Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C007804415; "Bridge No. 1230," Bridge Record, located at Saunders County Courthouse, Wahoo, Nebraska; field inspection by Mary McCormick, 23 May 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
North Oak Creek Bridge SAUN07
NDOR: C007804205

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
township road over North Oak Creek; S29/32, T14N, R5W
5.0 miles northwest of Valparaiso; Saunders County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 27)

CONDITION
good

OWNER
Saunders County

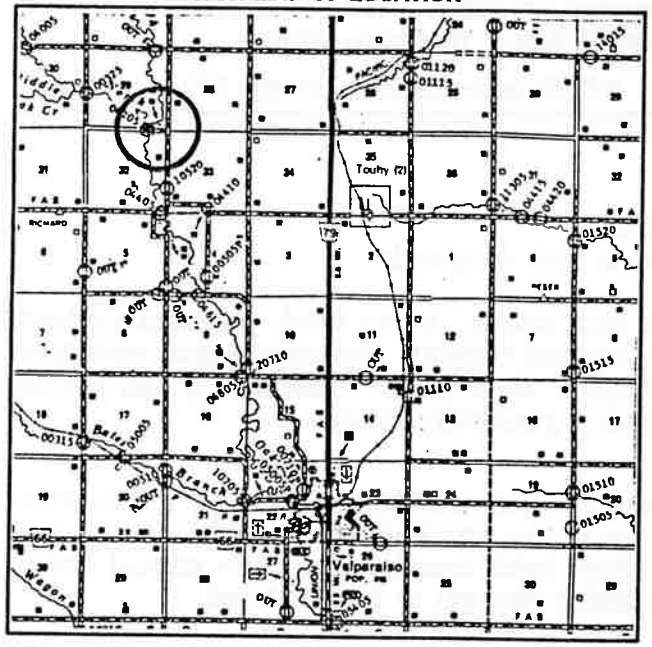
span number:	1	superstructure:	steel, 8-panel, pin-connected Pratt through truss
span length:	130.0'	substructure:	I-beam pile bent abutments with timber back- and wingwalls
total length:	132.0'	floor/decking:	concrete over I-beam stringers
roadway wdt.:	16.0'	other features:	upper chord: 2 channels with cover plate and lacing; lower cord: punched eyebars; vertical: 2 channels with lacing; diagonal: punched eyebars; counter: eyerod with turn-buckle; portal bracing and struts: 2 pair angles; floor beam: I-beams; top and bottom lateral bracing: round rod with threaded ends; guardrail: lattice

This medium-span through truss carries a secondary county road over North Oak Creek on the line between Sections 29/32, T14N, R5W, northwest of Valparaiso. Configured as a seven-panel, pin-connected Pratt through truss, the bridge was built circa 1910, and fits well within the technological trends of the period. The Canton Bridge Company of Canton, Ohio, held Saunders County's annual bridge building contract between 1905 and 1915 and may have erected this through truss. The bridge appears to be unaltered.

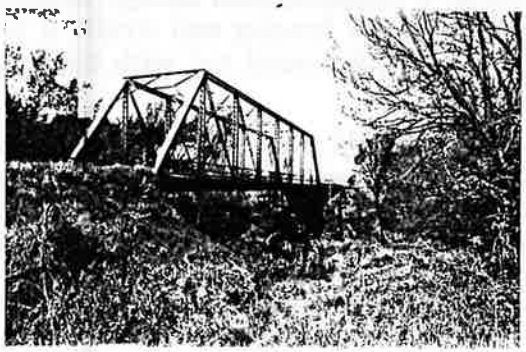
The Canton Bridge Company dominated bridge work in Saunders County from at least 1906 to 1913, holding the county's annual bridge construction contracts for successive years. In response to what they considered exorbitant unit-price bids submitted at the 1914 annual contract letting, the county commissioners decided to purchase all materials and construct bridges using local, force account labor. Saunders County stayed in the bridge business in 1914 and 1915, but in 1916 it returned again to the system of annual unit-price agreements, awarding that year's contract to the Wilson Re-enforced Concrete Company of Wahoo (the Saunders County seat). The Central Bridge and Construction Company, also based in Wahoo, dominated much of the county's bridge construction in the 1920s and 1930s. The Duck Creek Bridge typifies the type of medium-span through trusses erected by the Canton Bridge Company throughout Nebraska in the early 1900s.

NAME(S) OF STRUCTURE
North Oak Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C007804205; Saunders County Commissioners' Record, Books 6 - 8, covering the period 1905 to 1916, on file in the Saunders County Courthouse, Wahoo, NE; Saunders County Bridge Record, (three volumes containing bridge inspection reports from 1916, 1928, and 1932-1933), on file in the office of the Saunders County Highway Superintendent, Wahoo, NE; field inspection by Mary McCormick, 12 May 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Wahoo Creek Bridge
NDOR: C007804710P

SAUN08

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
township road over Wahoo Creek; Center N1/2, S18, T13N, R9E
1.0 miles north-northwest of Memphis; Saunders County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 27)

CONDITION
good

OWNER
Saunders County

span number: 1
span length: 100.0'
total length: 101.0'
roadway wdt.: 16.0'

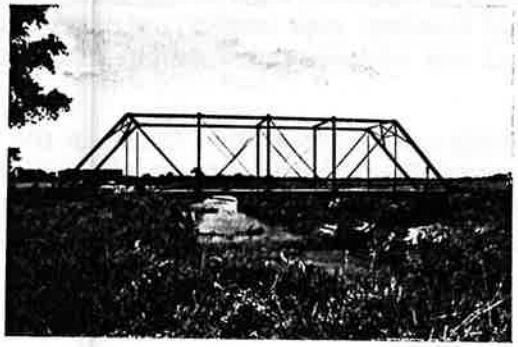
superstructure: steel, 6-panel, pin-connected Pratt through truss
substructure: concrete abutments and wingwalls
floor/decking: concrete on corrugated steel deck over I-beam stringers
other features: upper chord: 2 channels with cover plate and lacing; lower chord: punched eyebars; vertical: 2 channels with lacing except punched eyebars at hip; diagonal: punched eyebars; portal bracing: pair angles; strut: built-up channels; top and bottom lateral bracing: round rod with threaded ends; floor beam: I-beams; guardrail: 2 angles

This short-span through truss carries a secondary county road over Wahoo Creek in the north half of Section 18, T13N, R9E, northwest of Memphis. Configured as a seven-panel, pin-connected Pratt through truss, the bridge was built circa 1910, and fits well within the technological trends of the period. The Canton Bridge Company of Canton, Ohio, held Saunders County's annual bridge building contract between 1905 and 1915 and may have erected this through truss. Though unaltered, this bridge is a typically configured example of a common vehicular truss type in Nebraska.

NAME(S) OF STRUCTURE
Wahoo Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION

LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C007804710P; Saunders County Commissioners' Record, Books 6 - 8, covering the period 1905 to 1916, on file in the Saunders County Courthouse, Wahoo, NE; Saunders County Bridge Record, (three volumes containing bridge inspection reports from 1916, 1928, and 1932-1933), on file in the office of the Saunders County Highway Superintendent, Wahoo, NE; field inspection by Mary McCormick, 23 May 1989.

INVENTORIED BY	AFFILIATION	DATE
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Wahoo Creek Bridge
NDOR: C007805315

SAUN09

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
township road over Wahoo Creek; S27/28, T13N, R9E
2.5 miles northwest of Ashland; Saunders County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 30)

CONDITION
good

OWNER
Saunders County

span number:	1	superstructure:	steel, 4 panel, pin-connected Pratt half-hip pony truss
span length:	68.0'	substructure:	I-beam pile bent abutments with corrugated steel back- and wingwalls
total length:	69.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	14.1'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: punched eyebars; vertical: 2 pair angles with lattice; diagonal: punched eyebars; counter: eyerod with turnbuckle; floor beam: I-beam; guardrail: 2 channels.

This small-scale truss carries a secondary county road over Wahoo Creek on the line between Sections 27/28, T13N, R9E, northwest of Ashland. Configured as a pin-connected Pratt half-hip pony truss, the bridge was built circa 1910, and fits well within the technological trends of the period. The Canton Bridge Company of Canton, Ohio, held Saunders County's annual bridge building contract between 1905 and 1915, and very likely erected this crossing during this period. The county bridge record notes that in 1925, the bridge received new "I-beam piles and cap" for a total cost of $2652.90. The bridge, otherwise, has served to carry vehicular traffic in this rural Saunders County location. as originally built.

The Canton Bridge Company dominated bridge work in Saunders County from at least 1906 to 1913, holding the county's annual bridge construction contracts for successive years. In response to what they considered exorbitant unit-price bids submitted at the 1914 annual contract letting, the county commissioners decided to purchase all materials and construct bridges using local, force account labor. Saunders County stayed in the bridge business in 1914 and 1915, but in 1916 it returned again to the system of annual unit-price agreements, awarding that year's contract to the Wilson Re-enforced Concrete Company of Wahoo (the Saunders County seat). The Central Bridge and Construction Company, also based in Wahoo, dominated much of the county's bridge construction in the 1920s and 1930s. The Wahoo Creek Bridge typifies the type of small-span trusses erected by the Canton Bridge Company in Saunders County - and throughout Nebraska - in the early 1900s.

NAME(S) OF STRUCTURE
Wahoo Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION

LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C007805315; Saunders County Commissioners' Record, Books 6 - 8, covering the period 1905 to 1916, on file in the Saunders County Courthouse, Wahoo, NE; Saunders County Bridge Record, (three volumes containing bridge inspection reports from 1916, 1928, and 1932-1933), on file in the office of the Saunders County Highway Superintendent, Wahoo, NE; field inspection by Mary McCormick, 23 May 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Silver Creek Bridge
NDOR: C007805445

SAUN10

DATE(S) OF CONSTRUCTION
1925

LOCATION
County highway over Silver Creek; S26/35, T13N, R9E
1.0 mile north of Ashland; Saunders County, Nebraska

USE (ORIGINAL / CURRENT)
highway bridge / roadway bridge

RATING NRHP non-eligible (score: 9)

CONDITION
good

OWNER
Saunders County

span number: 1
span length: 100.0'
total length: 101.0'
roadway wdt.: 21.0'

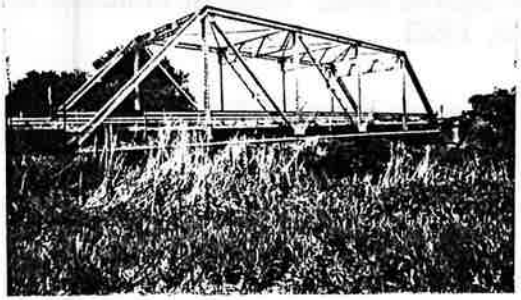
superstructure: steel, 5-panel, rigid-connected Pratt through truss
substructure: I-beam pile bent abutments with corrugated steel back- and wingwalls
floor/decking: concrete on corrugated steel over I-beam stringers
other features: upper chord: 2 channels with cover plate and lacing; lower chord: 2 channels with batten plates; vertical: 2 pair angles with lacing; diagonal: 2 angles with batten plates; portal bracing: 3 angles; strut: pair angles; top and bottom lateral bracing: angles; guardrail: corrugated steel; endpost-mounted bridge plate: **Missouri Highway Dept. Bridge No. C 490, 1925**

This medium-span truss crosses over Silver Creek on the line between Sections 26/35, T13N, R9E, a mile north of Ashland. As indicated by a plate on the bridge itself, the truss was fabricated as a highway span in Missouri in 1925 from a standard plan developed by the Missouri Highway Department. At some later date the truss was moved to its current location and re-erected. Featuring a five-panel, rigid-connected Pratt through truss, the Silver Creek Bridge rests on steel piles with corrugated steel back and wingwalls. Since its move, the bridge has served to carry vehicular traffic in this rural Saunders County location. Built in another state and subsequently moved, the contextual and locational integrity of this bridge are severely compromised.

NAME(S) OF STRUCTURE
Silver Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION

LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C007805445; bridge plate; field inspection by Mary McCormick, 23 May 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C007810920

SAUN11

DATE(S) OF CONSTRUCTION
ca.1935

LOCATION
township road over unnamed stream; S2/3, T14N, R5E
5.0 miles northwest of Weston; Saunders County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 14)

CONDITION
good

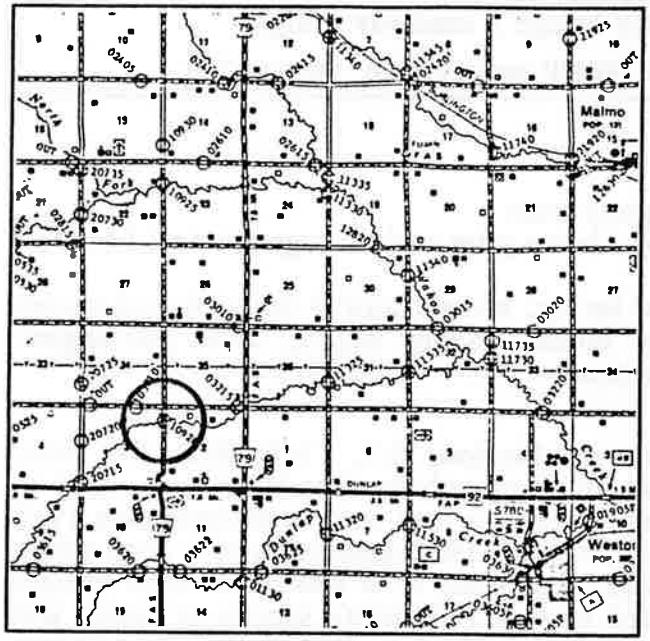
OWNER
Saunders County

span number:	1	superstructure:	steel, 5-panel, rigid-connected Camelback pony truss
span length:	100.0'	substructure:	concrete abutments and wingwalls, with by I-beam piles and corrugated steel backing
total length:	101.0'	floor/decking:	concrete over I-beam stringers
roadway wdt.:	25.0'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 channels with batten plates; vertical: I-beam; diagonal: I-beam; lateral bracing: angles; strut: pair angles; floor beam: I-beam; guardrail: 2 small I-beams.

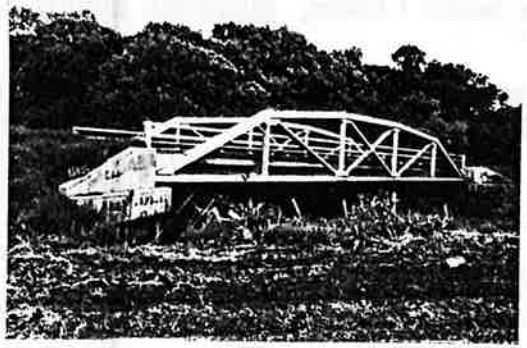
This bridge carries a secondary county road over an intermittent stream on the line between Sections 2/3, T14N, R5E, five miles northwest of Weston. Configured as a rigid-connected Camelback pony truss, the bridge was built elsewhere circa 1925 and moved to its present site sometime after 1933. Configured as a rigid-connected Camelback pony truss, the bridge was built elsewhere circa 1925 and moved to its present site sometime after 1928. An entry in the county bridge book refers to a 1928 inspection of a steel girder bridge on concrete abutments at this location in 1922. Evidently moved here after that date, this is one of at least three such bridges in the county (the others: **SAUN06** and **SAUN14**). This Camelback pony is not a standard plan of Nebraska's Bureau of Roads and Bridges. It may, therefore, have been erected originally in another state and subsequently moved to this site. (Saunders County is known to have acquired several such out-of-state trusses.) With its construction history undocumented, this bridge has only marginal integrity and interpretive value.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C007810920; "Bridge No. 683," Bridge Record, located at the Saunders County Courthouse, Wahoo, Nebraska; field inspection by Mary McCormick, 18 May 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Sand Creek Bridge SAUN12
NDOR: C007811030

DATE(S) OF CONSTRUCTION
1924; moved 1970

LOCATION
township road over Sand Creek; S3/10, T16N, R6E
4.0 miles south-southeast of Morse Bluff; Saunders County, Nebraska

USE (ORIGINAL / CURRENT)
highway bridge / roadway bridge

RATING NRHP non-eligible (score: 9)

CONDITION
good

OWNER
Saunders County

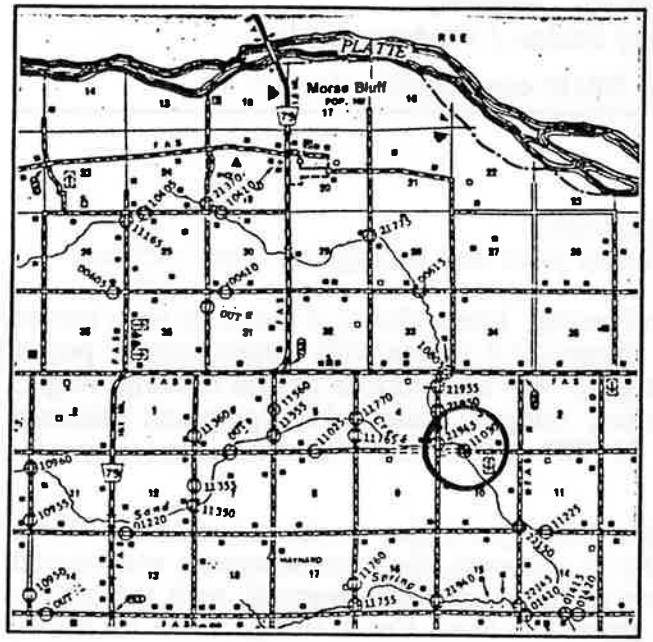
span number: 1
span length: 120.0'
total length: 121.0'
roadway wdt.: 20.4'

superstructure: steel, 6-panel, rigid-connected Pratt through truss
substructure: concrete abutments and wingwalls with I-beam piles and corrugated steel backing
floor/decking: concrete deck over I-beam stringers
other features: upper chord: 2 channels with cover plate and lacing; lower chord: 2 channels with batten plates; vertical: 2 pair angles with lacing; diagonal: 2 angles with batten plates; portal bracing: 2 angles with lacing; strut: pair angles; top and bottom lateral bracing: angle; floor beam: I-beam; guardrail: corrugated steel; endpost-mounted bridge plate: **Missouri Highway Dept. Bridge No. G. 606, 1924**; "1970" embossed in SE abutment wingwall

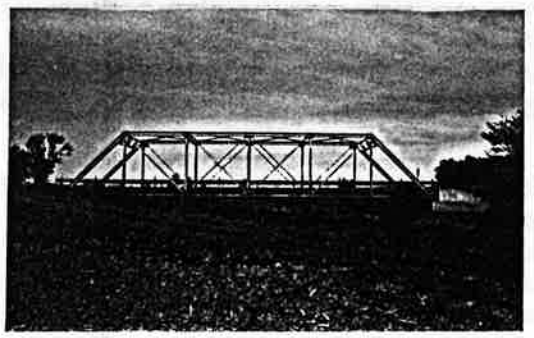
This medium-span truss crosses over Sand Creek on the line between Sections 3/10, T16N, R6E, four miles southeast of Morse Bluff. A bridge plate states: **Missouri Highway Dept. Bridge No. G. 606, 1924.** Thus built originally in Missouri, the superstructure was moved to its current location at an unknown date. The date "1970" has been etched in the concrete in the southeast wingwall, so it is possible that is when the bridge was moved. Featuring a six-panel, rigid-connected Pratt through truss, the Sand Creek Bridge since its move, has served to carry vehicular traffic in this rural Saunders County location. Built in another state and subsequently moved, the contextual and locational integrity of this bridge are severely compromised.

NAME(S) OF STRUCTURE
Sand Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C00781130; field inspection by Mary McCormick, 12 May 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Cottonwood Creek Bridge
NDOR: C007811340

SAUN13

DATE(S) OF CONSTRUCTION
ca.1910; moved 1926

LOCATION
township road over Cottonwood Creek; S12/17, T15N, R5/6E
1.7 miles southeast of Prague; Saunders County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 21)

CONDITION
good

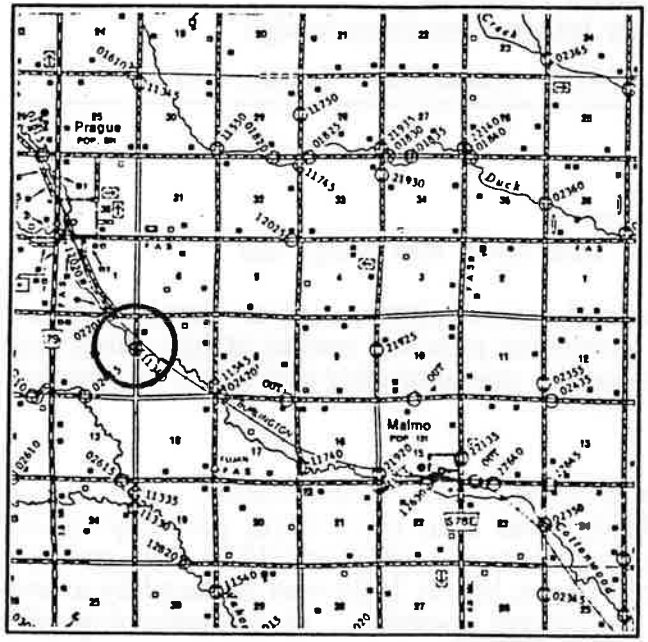
OWNER
Saunders County

span number:	1	superstructure:	steel, 7-panel, pin-connected Pratt through truss
span length:	120.0'	substructure:	I-beam pile bent abutments with corrugated steel back- and wingwalls
total length:	120.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.9'	other features:	upper chord: 2 channels with cover plate and batten plates; lower chord: punched eyebars; vertical: 2 channels with lattice except for punched eyebar at hip; diagonal: punched eyebars; counter: eyerod with turnbuckle; portal bracing and struts: pair angles; floor beam: I-beams; guardrail: 2 angles.

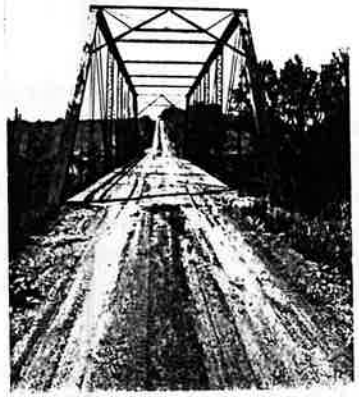
This medium-span truss carries a county road over Cottonwood Creek on the line between Sections 12/17, T15N, R5/6E, a little under two miles southeast of Prague. Configured as a pin-connected Pratt through truss, the bridge was built circa 1910, probably by the Canton Bridge Company of Canton, Ohio, which held Saunders County's annual bridge contracts between 1905 and 1915. The county's bridge book reveals that this truss originally spanned Cottonwood Creek at the south end of Prague, but in 1926 was replaced by a new bridge (SAUN15). This span, meanwhile, was moved downstream and re-erected at its current location. Never technologically distinguished, the Cottonwood Creek Bridge toady lacks any appreciable levels of significance or integrity.

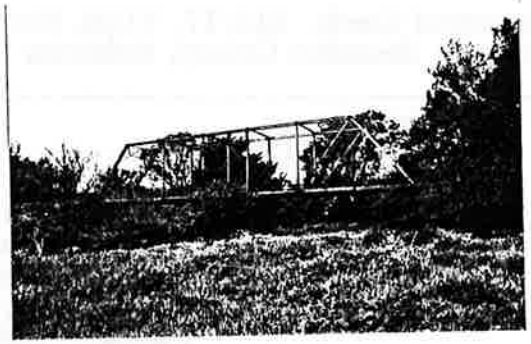
NAME(S) OF STRUCTURE
Cottonwood Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C007811340; "Bridge No. 280," Bridge Record, located at the Saunders County Courthouse, Wahoo, Nebraska; field inspection by Mary McCormick, 23 May 1989.

INVENTORIED BY	AFFILIATION	DATE
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C007811535

SAUN14

DATE(S) OF CONSTRUCTION
ca.1935

LOCATION
county highway over unnamed stream; S31/32, T15N R6E
3.0 miles northwest of Weston; Saunders County, Nebraska

USE (ORIGINAL / CURRENT)
highway bridge / highway bridge

RATING NRHP non-eligible (score: 14)

CONDITION
good

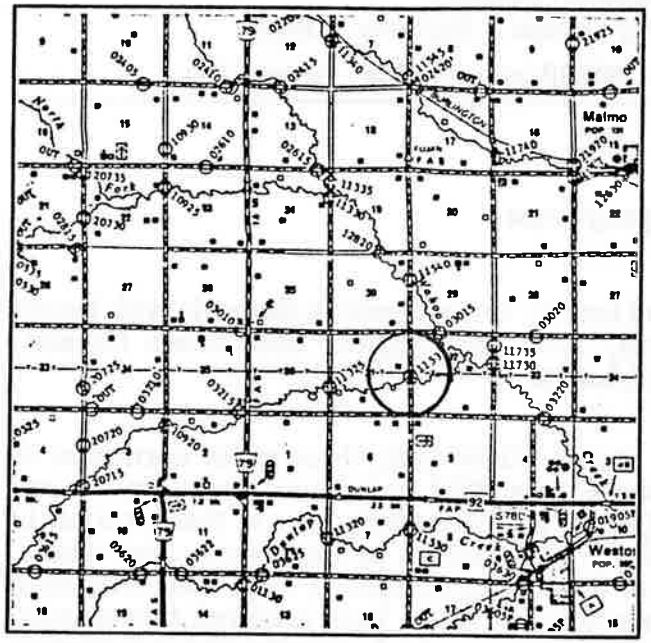
OWNER
Saunders County

span number:	1	superstructure:	steel, 5-panel, rigid-connected Camelback pony truss
span length:	100'	substructure:	concrete abutments and wingwalls
total length:	101.0'	floor/decking:	concrete deck over I-beam stringers
roadway wdt.:	24.6'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 channels with batten plates; vertical: I-beams; diagonal: I-beams; strut: pair angles; floor beam: I-beams; lateral bracing: angles; guardrail: 2 small I-beams

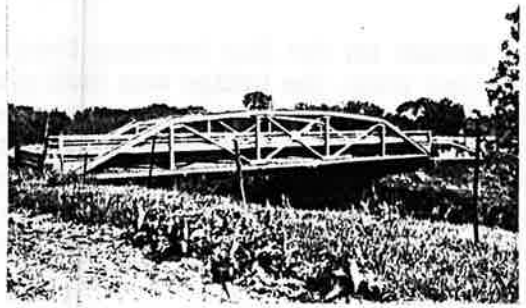
This bridge carries a county road over an unnamed stream on the line between Sections 31/32, T15N R6E, three miles northwest of Weston. Configured as a rigid-connected Camelback pony truss, the bridge was built elsewhere circa 1925 and moved to its present site sometime after 1928. An entry in the county bridge book refers to the inspection of a 50-foot, pin-connected truss at this location in 1916 and again in 1928. Evidently moved here after that date, this is one of at least three such bridges in the county (the others: **SAUN06** and **SAUN11**). This Camelback pony is not a standard plan of Nebraska's Bureau of Roads and Bridges. It may, therefore, have been erected originally in another state and subsequently moved to this site. (Saunders County is known to have acquired several such out-of-state trusses.) With its construction history undocumented, the Wahoo Creek Bridge has only marginal integrity and interpretive value.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C007811535; "Bridge No. 285," Bridge Record, located at the Saunders County Courthouse, Wahoo, Nebraska; field inspection by Mary McCormick, 17 May 1989.

INVENTORIED BY	AFFILIATION	DATE
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Cottonwood Creek Bridge SAUN15
NDOR: C007812020

DATE(S) OF CONSTRUCTION
1926

LOCATION
county highway over Cottonwood Creek; S1/36, T15/16N, R5E
Prague; Saunders County, Nebraska

USE (ORIGINAL / CURRENT)
highway bridge / highway bridge

RATING NRHP non-eligible (score: 32)

CONDITION
good

OWNER
Saunders County

span number: 1
span length: 100.0'
total length: 103.0'
roadway wdt.: 19.0'

superstructure: steel, 5-panel, rigid-connected Pratt pony truss
substructure: concrete abutment and wingwalls
floor/decking: concrete deck over I-beam stringers
other features: upper chord: 2 channels with cover plate and lacing; lower chord: 2 channels with batten plates; vertical: 2 pair angles with batten plates; diagonal: 2 angles with batten plates; lateral bracing: round rod with threaded ends; strut: pair angles; floor beam: I-beams; guardrail: 2 channels except low concrete wall along northwest wingwall; endpost-mounted bridge plate: **Saunders County-1926-Board of Commissioners - Joseph Moline, E.P. Malloy, George Harmon, [etc.]-Built by Central Bridge and Const. Co., Wahoo, Nebr.**

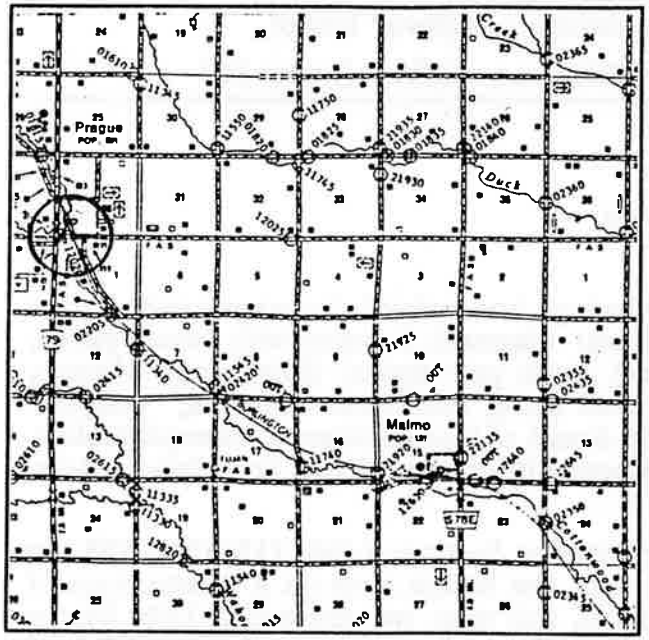
This medium-span truss carries a secondary county road over Cottonwood Creek on the line between Sections 1/36, T15/16N, R5E, on the south edge of the small town of Prague. Configured as a rigid-connected Pratt pony truss, the bridge rests on a substructure of concrete abutments and wingwalls. As indicated by a commemorative plate on the bridge itself, this truss was erected in 1926 by the Central Bridge and Construction Company of Wahoo NE. Obtaining steel from the Inland steel mills in East Chicago, Indiana, Central Bridge built the crossing using a standard design issued by Nebraska's Bureau of Roads and Bridges. An earlier truss bridge at this site (SAUN13) was moved in 1926 two miles to the southeast. This bridge appears not to have had any major alterations since it was completed in 1926.

The Canton Bridge Company dominated bridge work in Saunders County from at least 1906 to 1913, holding the county's annual bridge construction contracts for successive years. In response to what they considered exorbitant unit-price bids submitted at the 1914 annual contract letting, the county commissioners decided to purchase all materials and construct bridges using local, force account labor. Saunders County stayed in the bridge business in 1914 and 1915, but in 1916 it returned again to the system of annual unit-price agreements, awarding that year's contract to the Wilson Re-enforced Concrete Company of Wahoo (the Saunders County seat). The Central Bridge and Construction Company, also based in Wahoo, dominated much of the county's bridge construction in the 1920s and 1930s. The Cottonwood Creek Bridge typifies the type of medium-span trusses erected by this latter firm in the 1920s. It is one of dozens of this relatively common structural type found in the state. Virtually all of these can be attributed to the standardized designs developed by the state highway department. Although the 100-foot span length is the longest developed by the highway department for this truss configuration (through trusses were used for longer spans), this fact is only marginally noteworthy.

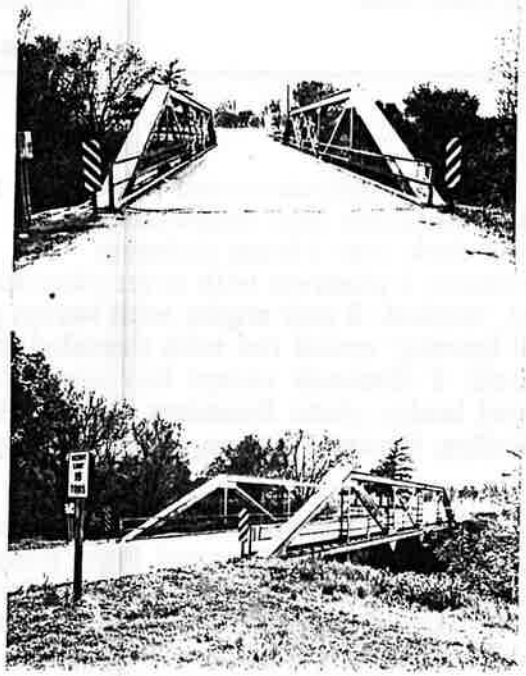
NAME(S) OF STRUCTURE

Cottonwood Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C007812020; Saunders County Commissioners' Record, Book 9, covering the period 1923 to 1929, on file in the Saunders County Courthouse, Wahoo, NE; Saunders County Bridge Record, (three volumes containing bridge inspection reports from 1916, 1928, and 1932-1933), on file in the office of the Saunders County Highway Superintendent, Wahoo, NE; bridge plate; field inspection by Mary McCormick, 19 May 1989.

INVENTORIED BY

Lon Johnson, Renewable Technologies, Inc.

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Sand Creek Bridge
NDOR: C007812940

SAUN16

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
township road over Sand Creek; S4/5, T15N, R7W
1.5 miles northwest of Colon; Saunders County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 27)

CONDITION
good

OWNER
Saunders County

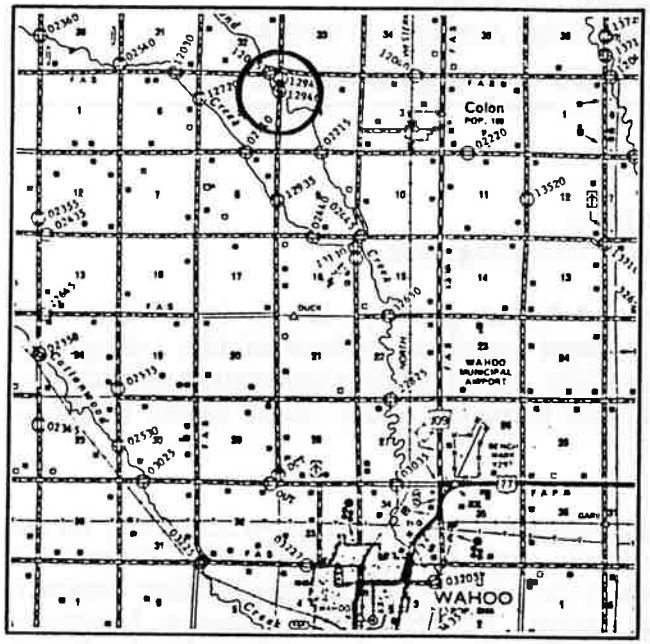
span number: 1
span length: 120.0'
total length: 120.0'
roadway wdt.: 15.8'

superstructure: steel, 7-panel, pin-connected Pratt through truss
substructure: I-beam pile bent abutments with timber back- and wingwalls
floor/decking: timber deck over I-beam stringers
other features: upper chord: 2 channels with cover plate and batten plates; lower chord: punched eyebars; vertical: 2 channels with lacing, except punched eyebars at hip; diagonal: punched eyebars; counter: eyerod with turnbuckle; portal bracing and struts: pair angles; top and bottom lateral bracing: round rod with threaded ends; floor beam: I-beams; guardrail: 2 angles.

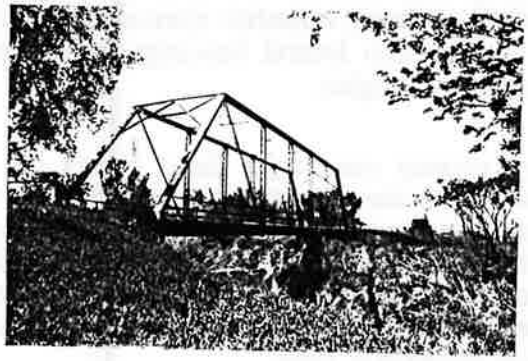
This medium-span through truss carries a secondary county road over Sand Creek on the line between Sections 4/5, T15N, R7W, northwest of Colon. Configured as a pin-connected Pratt through truss, the bridge was built circa 1910, and fits well within the technological trends of the period. The Canton Bridge Company of Canton, Ohio, held Saunders County's annual bridge building contract between 1905 and 1915 and erected numerous Pratt pony trusses in the county during this period. For this longer crossing, however, the Ohio firm opted for a through truss design. Canton built the seven-panel truss on a substructure of steel piles with timber back and wingwalls. Since its completion, the bridge has served to carry vehicular traffic in this rural Saunders County location. The Sand Creek Bridge is a typical example of an exceedingly common structural type.

NAME(S) OF STRUCTURE
Sand Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C007812940; Saunders County Commissioners' Record, Books 6 - 8, covering the period 1905 to 1916, on file in the Saunders County Courthouse, Wahoo, NE; Saunders County Bridge Record, (three volumes containing bridge inspection reports from 1916, 1928, and 1932-1933), on file in the office of the Saunders County Highway Superintendent, Wahoo, NE; field inspection by Mary McCormick, 12 May 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Silver Creek Bridge SAUN17
NDOR: C007814910P

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county highway over Silver Creek; Center of S1/2, S17, T13N, R9E
South of Memphis; Saunders County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 32)

CONDITION
good

OWNER
Saunders County

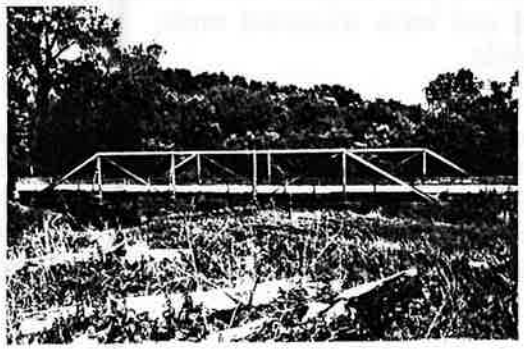
span number:	1	superstructure:	steel, 5-panel, pin-connected Pratt pony truss with steel stringer approach spans
span length:	100.0'	substructure:	steel I-beam pile abutments with timber back- and wingwalls; I-beam pile piers
total length:	164.0'	floor/decking:	concrete deck over I-beam stringers
roadway wdt.:	15.9'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: punched eyebars; vertical: 2 pair angles with batten plates; diagonal: punched eyebars; lateral bracing: round rod with threaded ends; strut: pair angles; floor beam: I-beams; guardrail: 2 channels

This medium-scale truss carries a county highway over Silver Creek in the south half of Section 17, T13N, R9E, just south of Memphis. Configured as a five-panel, pin-connected Pratt pony truss, the bridge was built circa 1910, evidently fabricated from a standard plan by the Nebraska State Engineer. The Canton Bridge Company of Canton, Ohio, held Saunders County's annual bridge building contracts between 1905 and 1915, and very likely erected this crossing during this period. Since its completion, the bridge has served to carry vehicular traffic in this rural Saunders County location. It is a typically configured example of an exceedingly common vehicular truss type in Nebraska.

NAME(S) OF STRUCTURE
Silver Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION

LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C007814910P; Saunders County Commissioners' Record, Books 6 - 8, covering the period 1905 to 1916, on file in the Saunders County Courthouse, Wahoo, NE; Saunders County Bridge Record, (three volumes containing bridge inspection reports from 1916, 1928, and 1932-1933), on file in the office of the Saunders County Highway Superintendent, Wahoo, NE; field inspection by Mary McCormick, 23 May 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Wahoo Creek Bridge
NDOR: C007815060

SAUN18

DATE(S) OF CONSTRUCTION
ca.1925

LOCATION
county highway over Wahoo Creek; S17/20, T13N, R9E
0.2 mile south of Memphis; Saunders County, Nebraska

USE (ORIGINAL / CURRENT)
highway bridge / roadway bridge

RATING NRHP non-eligible (score: 5)

CONDITION
good

OWNER
Saunders County

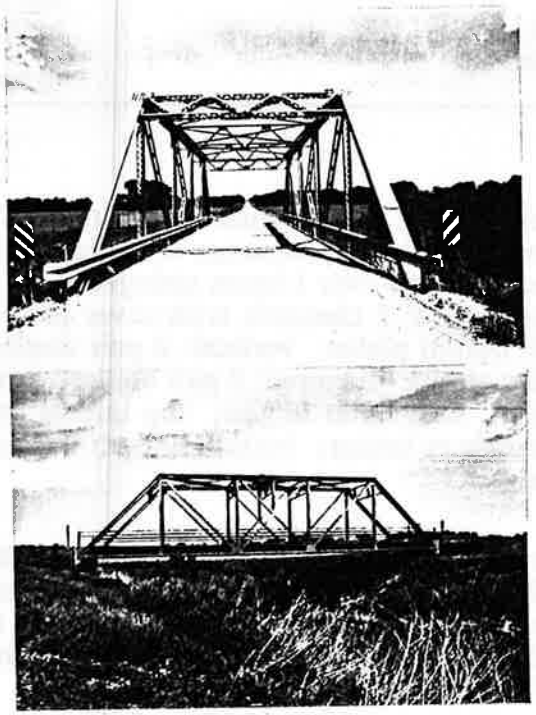
span number:	1	superstructure:	steel, 5-panel, rigid-connected Pratt through truss
span length:	100.0'	substructure:	I-beam pile bent abutments with timber back- and wingwalls
total length:	103.0'	floor/decking:	concrete deck over I-beam stringers
roadway wdt.:	17.7'	other features:	upper chord: 2 channels with cover plate and batten plates; lower chord: 2 pair angles with batten plates; vertical: 2 pair angles with lacing, except 2 pair angles with batten plates at hip; diagonal: 2 pair angles with batten plates; portal bracing: pair angles with lacing; strut: pair angles; top lateral bracing: pair angles with lacing, expect built-up channels at center; bottom lateral bracing: steel plate; floor beam: I-beams; guardrail: 3 angles

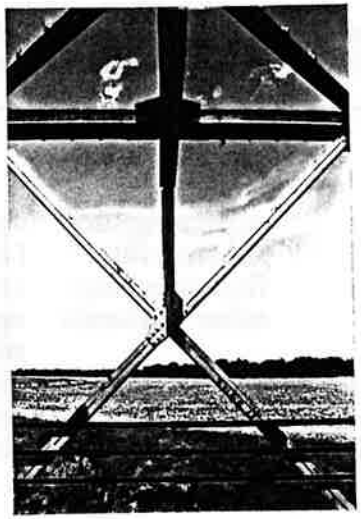
Located on the southern periphery of the small town of Memphis, the Wahoo Creek Bridge is comprised of a single 100-foot rigid-connected Pratt through truss, supported by steel pile bent abutments with timber back and wingwalls. The truss's date of erection and builder are unknown, but based on its design attributes, it appears to have been built in the mid-1920s in Missouri from standard plans delineated by the Missouri Highway Department and moved at a later date to this location. Thus built in another state and subsequently moved, the contextual and locational integrity of this bridge are severely compromised.

NAME(S) OF STRUCTURE
Wahoo Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION

LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C007815060; Saunders County Commissioners' Record, Book 9, covering the period 1923 to 1929, on file in the Saunders County Courthouse, Wahoo, NE; Saunders County Bridge Record, (three volumes containing bridge inspection reports from 1916, 1928, and 1932-1933), on file in the office of the Saunders County Highway Superintendent, Wahoo, NE; field inspection by Mary McCormick, 23 May 1989.

INVENTORIED BY	AFFILIATION	DATE
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Otoe Creek Bridge
NDOR: C007821625

SAUN19

DATE(S) OF CONSTRUCTION
ca.1925

LOCATION
county highway over Otoe Creek; S23/26, T16N, R8E
3.7 miles northwest of Leshara; Saunders County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 22)

CONDITION
good

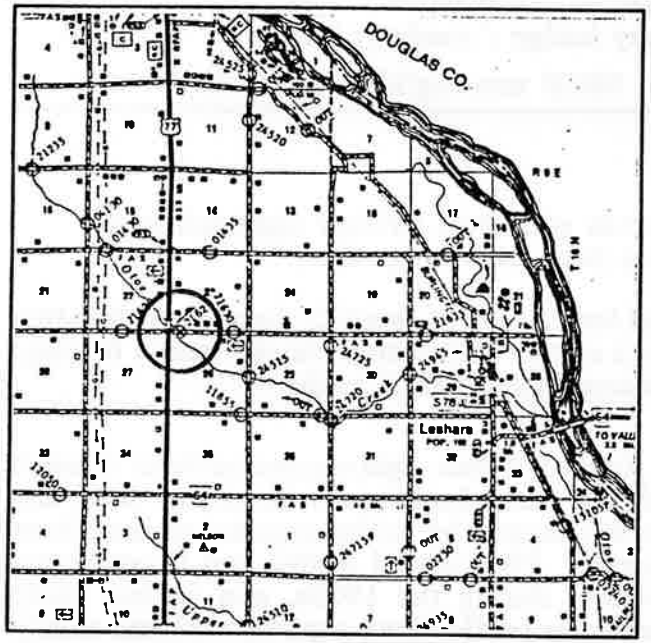
OWNER
Saunders County

span number:	1	superstructure:	steel, 5-panel, rigid-connected Pratt pony truss with steel stringer approach span
span length:	100.0'	substructure:	steel pile bents with timber/corrugated steel back- and wingwalls
total length:	101.0'	floor/decking:	concrete deck over I-beam stringers
roadway wdt.:	20.3'	other features:	upper chord: 2 channels with cover plate and lattice; lower chord: 2 channels with batten plates; vertical: built-up I-beam; diagonal: 2 angles with batten plates; lateral bracing: angle; strut: pair angles; floor beam: I-beams; guardrail: 2 angles

Located northwest of the small town of Leshara, this Otoe Creek crossing is comprised of a single 100-foot rigid-connected Pratt through truss with a steel stringer approach span on its west end. Support is provided by steel pile bent abutments with timber back and wingwalls. The truss's date of erection and builder are unknown, but based on its design attributes, the bridge appears to have been built in the mid-1920s from standard plans delineated by the Nebraska Highway Department. The Central Bridge and Construction Company of nearby Wahoo, Nebraska, was the most active Saunders County bridge builder during the 1920s, and is thus likely responsible for erection of this truss. Since its completion, the bridge has served to carry vehicular traffic along a gravel-surfaced county road.

NAME(S) OF STRUCTURE
Otoe Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C007821625; Saunders County Commissioners' Record, Book 9, covering the period 1923 to 1929, on file in the Saunders County Courthouse, Wahoo, NE; Saunders County Bridge Record, (three volumes containing bridge inspection reports from 1916, 1928, and 1932-1933), on file in the office of the Saunders County Highway Superintendent, Wahoo, NE; field inspection by Mary McCormick, 12 May 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Duck Creek Bridge
NDOR: C007822140

SAUN20

DATE(S) OF CONSTRUCTION
ca.1925

LOCATION
county highway over Duck Creek; S26/27, T6N, R6E
4.0 miles north of Malmo; Saunders County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 22)

CONDITION
good

OWNER
Saunders County

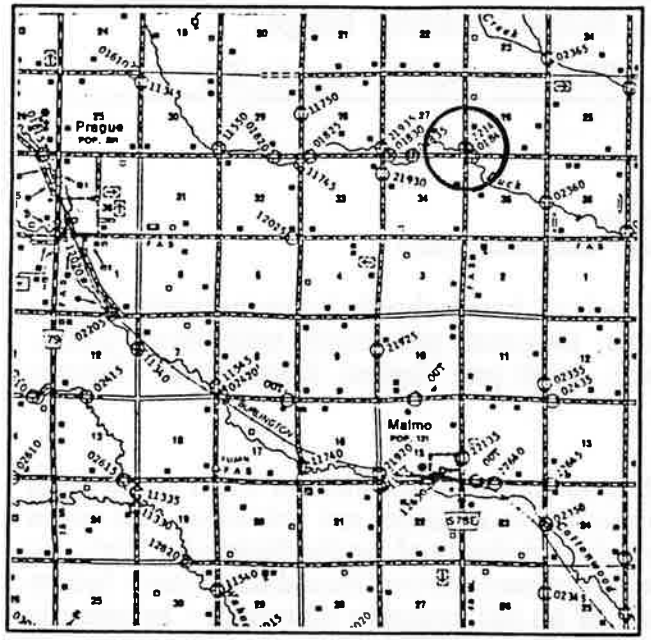
span number:	1	superstructure:	steel, 5-panel, rigid-connected Pratt pony truss
span length:	100.0'	substructure:	I-beam pile bent abutments with timber back- and wingwalls
total length:	101.0'	floor/decking:	concrete deck over I-beam stringers
roadway wdt.:	20.1'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 channels with batten plates; vertical: 2 pair angles with batten plates; diagonal: pair angles with batten plates; lateral bracing: round rod with threaded ends; strut: pair angles; floor beam: I-beams; guardrail: 2 channels

Located four miles north of Malmo, the Duck Creek Bridge consists of a single five panel, 100-foot rigid-connected Pratt pony truss supported by steel pile bent abutments with timber back and wingwalls. The truss's date of erection and builder are unknown, but based on its design attributes, the bridge appears to have been built in the mid-1920s from standard plans delineated by the Nebraska Highway Department. The Central Bridge and Construction Company of nearby Wahoo, Nebraska, was the most active Saunders County bridge builder during the 1920s, and hence, is likely responsible for erection of this truss. Remnants of an old concrete abutment - apparently from an earlier span - are visible underneath the truss on the creek's north bank.

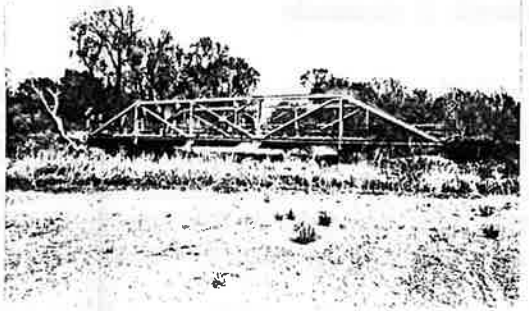
The Canton Bridge Company dominated bridge work in Saunders County from at least 1906 to 1913, holding the county's annual bridge construction contracts for successive years. In response to what they considered exorbitant unit-price bids submitted at the 1914 annual contract letting, the county commissioners decided to purchase all materials and construct bridges using local, force account labor. Saunders County stayed in the bridge business in 1914 and 1915, but in 1916 it returned again to the system of annual unit-price agreements, awarding that year's contract to the Wilson Re-enforced Concrete Company of Wahoo (the Saunders County seat). The Central Bridge and Construction Company, also based in Wahoo, dominated much of the county's bridge construction in the 1920s and 1930s. The Duck Creek Bridge typifies the type of medium-span trusses erected from state standard designs by this latter firm in the 1920s.

NAME(S) OF STRUCTURE
Duck Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Debarment of Roads, Structure Inventory and Appraisal: Structure Number C007822140; Saunders County Commissioners' Record, Books 6 - 8, covering the period 1905 to 1916, on file in the Saunders County Courthouse, Wahoo, NE; Saunders County Bridge Record, (three volumes containing bridge inspection reports from 1916, 1928, and 1932-1933), on file in the office of the Saunders County Highway Superintendent, Wahoo, NE; field inspection by Mary McCormick, 10 May 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Upper Clear Creek Bridge
NDOR: C007822840

SAUN21

DATE(S) OF CONSTRUCTION
1926

LOCATION
township road over Upper Clear Creek; S22/27, T15N, R9E
0.1 mile northeast of Yutan; Saunders County, Nebraska

USE (ORIGINAL / CURRENT)
highway bridge / roadway bridge

RATING NRHP non-eligible (score: 7)

CONDITION
good

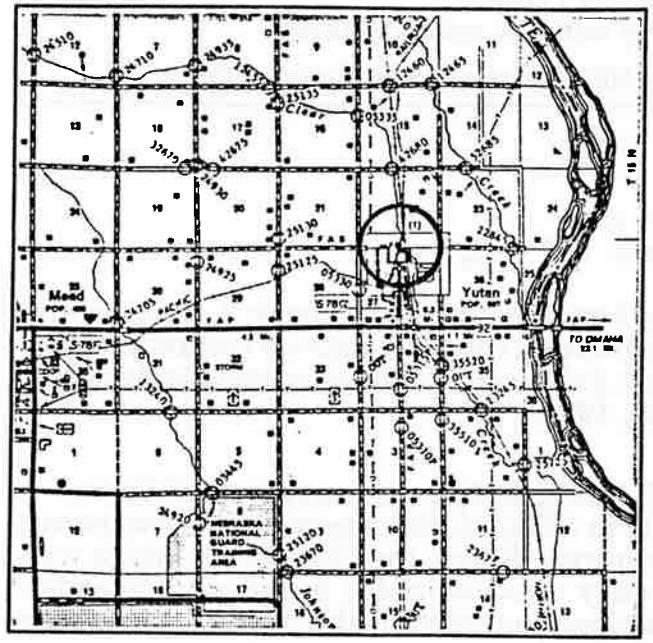
OWNER
Saunders County

span number:	1	superstructure:	steel, 3-panel, rigid-connected Warren pony truss
span length:	60.0'	substructure:	I-beam pile bent abutments with timber back- and wing walls
total length:	61.0'	floor/decking:	concrete deck over I-beam stringers
roadway wdt.:	20.5'	other features:	upper chord: 2 channels with cover plate and batten plates; lower chord: 2 channels with batten plates; vertical and diagonal: built-up I-beams; counters: built-up channels; lateral bracing: angle; floor beam: I-beams; guardrail: 2 channels; endpost-mounted bridge plate: **Missouri Highway Dept., Bridge No. H. 258, 1926**

This small-scale truss crosses over Upper Clear Creek on the line between Sections 22/27, T15N, R9E, a mile northeast of Yutan. A bridge plate states: **Missouri Highway Dept., Bridge No. H. 258, 1926.** Thus built originally in Missouri, the superstructure was moved to its current location at an unknown date. Featuring a three-panel, rigid-connected Warren truss design, the Clear Creek Bridge rests on steel piles with timber back and wingwalls. Since its move, the bridge has served to carry vehicular traffic in this rural Saunders County location. Built in another state and subsequently moved, the contextual and locational integrity of this bridge are severely compromised.

NAME(S) OF STRUCTURE
Upper Clear Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C007822840; bridge plate; field inspection by Mary McCormick, 23 May 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Wahoo Creek Bridge
NDOR: C007824650

SAUN22

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
township road over Wahoo Creek; S2/11, T13N, R8E
3.5 miles northwest of Memphis; Saunders County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge /roadway bridge

RATING NRHP non-eligible (score: 27)

CONDITION
good

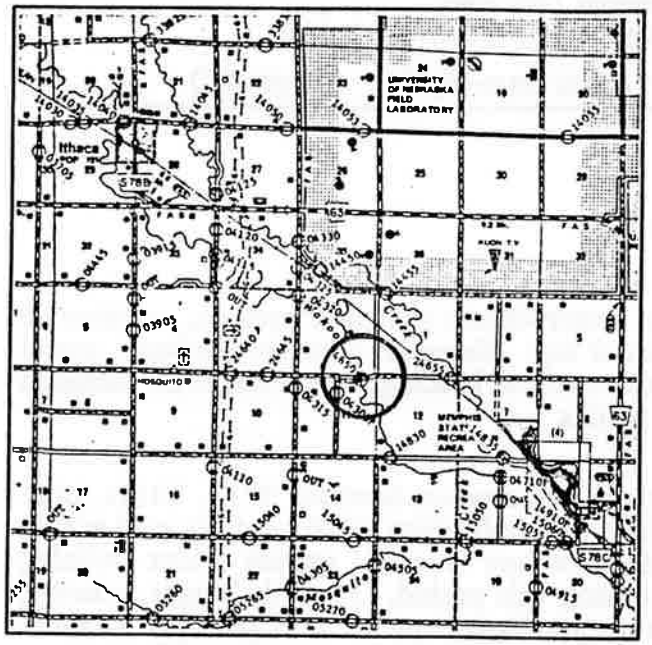
OWNER
Saunders County

span number:	1	superstructure:	steel, 6-panel, pin-connected Pratt through truss
span length:	100.0'	substructure:	concrete abutments and wingwalls
total length:	100.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	16.3'	other features:	upper cord: 2 channels with batten plates; lower chord: punched eyebars; vertical: 2 channels with lacing except punched eyebars at hip; diagonal: punched eyebars; portal bracing and struts: pair angles; top and bottom lateral bracing: round rod with threaded ends; floor beams: I-beams; guardrail: 2 planks

This medium-span through truss carries a secondary county road over Wahoo Creek on the line between Sections 2/11, T13N, R8E, northwest of Memphis. Configured as a six-panel, pin-connected Pratt through truss, the bridge was built circa 1910, and fits well within the technological trends of the period. The Canton Bridge Company of Canton, Ohio, held Saunders County's annual bridge building contract between 1905 and 1915 and erected numerous Pratt pony trusses in the county during this period. For this longer crossing, however, the Ohio firm opted for a through truss design. Canton probably built the truss on a substructure of steel piles with timber back and wingwalls. Physical evidence, though, suggests that the original substructure was replaced fairly recently with concrete abutments and wingwalls. Since its completion, the bridge has served to carry vehicular traffic in this rural Saunders County location. The Wahoo Creek Bridge is a typical example of a common structural type.

NAME(S) OF STRUCTURE
Wahoo Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C007824650; Saunders County Commissioners' Record, Books 6 - 8, covering the period 1905 to 1916, on file in the Saunders County Courthouse, Wahoo, NE; Saunders County Bridge Record, (three volumes containing bridge inspection reports from 1916, 1928, and 1932-1933), on file in the office of the Saunders County Highway Superintendent, Wahoo, NE; field inspection by Mary McCormick, 23 May 1989.

INVENTORIED BY	AFFILIATION	DATE
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Louisville Branch Overhead SAUN23
NDOR: S006 33962

DATE(S) OF CONSTRUCTION
1931

LOCATION
U.S. Highway 6 over Burlington Northern Railroad; SW 1/4, S31, T13N, R10E
1.0 mile northeast of Ashland; Saunders County, Nebraska

USE (ORIGINAL / CURRENT)
highway overpass / highway overpass

RATING determined NRHP non-eligible (score: 33)

CONDITION
good

OWNER
Nebraska Department of Roads

span number:	9	superstructure:	steel I-beam stringer
span length:	53.0'	substructure:	concrete abutments; 2 concrete piers, 2 concrete pier towers, and an I-beam pier (center)
total length:	239.0'	floor/decking:	concrete
roadway wdt.:	23.9'	other features:	5 I-beam stringers per span; bridging: I-beam; guardrail: 2 pipes

The Nebraska Bureau of Roads and Bridges engineered this railroad overpass near Ashland early in 1931. Consisting of nine steel stringer spans, the structure was configured using state standard specifications. The Bureau contracted with the Woods Brothers Construction Company of Lincoln to build the overpass, and the Woods Brothers in turn contracted with the Pittsburgh-Des Moines Steel Company to fabricate the superstructure. Built that year as Project No. 107-B, the Louisville Overhead was built later that year and has carried vehicular traffic since, in essentially unaltered condition.

The Louisville Branch Overhead typified a national effort to separate highway grades from railroads at their intersections. With its nine 53-foot steel stringer spans, the structure is a typically configured and modestly dimensioned example of 1930s highway bridge design in Nebraska.

NAME(S) OF STRUCTURE
Louisville Branch Overhead

PHOTOS AND SKETCH MAP OF LOCATION

LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure and Inventory Appraisal: Structure Number S006 33962; Nebraska Department of Public Works, **Nineteenth Biennial Report**, 1931-32; "Louisville Branch Overhead," original construction drawings by Nebraska Bureau of Roads and Bridges, 7 February 1931, located at Nebraska Department of Roads, Lincoln, Nebraska; field inspection by Mary McCormick, 23 May 1990.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge SAUN24
NDOR: S006 34032

DATE(S) OF CONSTRUCTION
1931

LOCATION
U.S. Highway 6 over Dry Channel of Salt Creek; NE1/4, S31, T13N, R10E
1.7 miles northeast of Ashland; Saunders County County, Nebraska

USE (ORIGINAL / CURRENT)
highway bridge / highway bridge

RATING NRHP non-eligible (score: 32)

CONDITION
good

OWNER
Nebraska Department of Roads

span number:	1	superstructure:	steel stringer
span length:	60.0'	substructure:	timber pile bent abutments with timber backwalls; concrete and timber pile piers
total length:	242.0'	floor/decking:	concrete deck over steel stringers
roadway wdt.:	23.9'	other features:	4 I-beam stringers per span; guardrail: 2 pipes

This medium-scale bridge carries U.S. Highway 6 over a dry channel of Salt Creek northeast of Ashland. As delineated by the Nebraska Bureau of Roads and Bridges in January 1931, the bridge is configured as a heavily skewed steel stringer structure, with a single 60-foot span supported by concrete piers over the channel and six 30-foot approaches (three per side) supported by timber pile bents. The bureau awarded a construction contract under Project No. 107-8 in 1931 to the Woods Brothers Construction Company. Using a superstructure fabricated by the Pittsburgh-Des Moines Steel Company, the Lincoln-based contractor completed the bridge later that year. Essentially unaltered, the bridge has functioned in place since. It is a typically configured and modestly dimensioned example of highway bridge construction in Nebraska in the 1930s.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION

LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure and Inventory Appraisal: Structure Number S006 34032; field inspection by Mary McCormick, 23 May 1990.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Ashland Bridge [Silver Street Bridge] SAUN25
NDOR: U0105F5605

DATE(S) OF CONSTRUCTION
1936

LOCATION
Silver Street over Salt Creek; NW1/4, S1, T12N, R9E
Ashland; Saunders County, Nebraska

USE (ORIGINAL / CURRENT)
highway bridge / city street bridge

RATING potentially NRHP eligible (score: 50)

CONDITION
good

OWNER
Town of Ashland

span number: 1
span length: 100.0'
total length: 237.0'
roadway wdt.: 21.7'

superstructure: steel, 8-panel, rigid-connected polygonal Warren pony truss; steel stringer approach spans
substructure: concrete abutment with timber wingwalls; concrete piers
floor/decking: concrete deck over transverse joists (I-beams)
other features: upper chord: 2 channels with cover plate and lacing; lower cord: 2 channels with batten plates; vertical and diagonal: I-beam; guardrail: 2 angles; walkway (south): concrete deck supported by pair angle with steel plate

In late August 1935, the Saunders County commissioners voted to file for funding from the Federal Emergency Administration (FEA) of Public Works for a new bridge and approaches at this location. The Lincoln Drainage District planned to alter the course of Salt Creek thus necessitating a new bridge at Ashland to carry heavily traveled US Highway 6 (Silver Street) over the new channel bed. At this time, the commissioners also decided to request FEA monies for 5 other new county bridges. The Ashland Bridge was constructed by the Central Bridge and Construction Company of Wahoo, which held the annual contract to build the bridges in Saunders County that year.

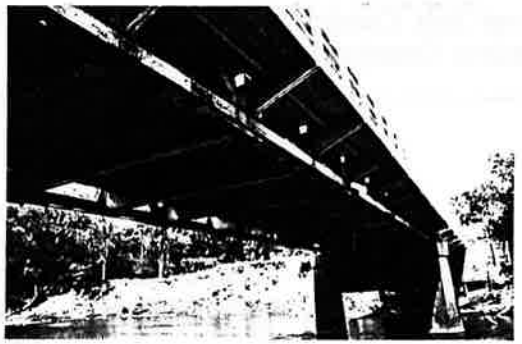
The Nebraska Bureau of Roads and Bridges eschewed Warren truss configurations in favor of the Pratt truss throughout the 1910s and 1920s. In the early 1930s, however, the bureau designed a handful of bridges using Warrens with polygonal top chords for its long-span pony trusses. The Ashland Bridge, the Franklin Bridge (FRAN06), the Arlington Bridge over the Elkhorn River, the West Blue River Bridge near Dorchester and the Nemaha River Bridge near Auburn were the most notable examples of this type built between 1931 and 1936. The Ashland and the Franklin Bridges remain intact, but the others have all since been demolished. Although adopted as a standard design in other states, the polygonal Warren truss was never used extensively in Nebraska. The Ashland Bridge is thus technologically noteworthy as one of two remaining examples in the state of this formative engineering exercise. It is historically significant for its association with public works projects funded by the federal government in the 1930s to provide relief at a time of nation wide economic depression. The bridge also has historical importance to the town of Ashland for linking the northwest and southeast sections of the town and providing a tie to U.S. Highway 6 which, until the construction of Interstate I-80, served as the major connection between Omaha, Lincoln and outlying towns.

NAME(S) OF STRUCTURE

Ashland Bridge [Silver Street Bridge]

PHOTOS AND SKETCH MAP OF LOCATION

LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number U0105F5605; Saunders County Supervisors' Record, 29 April 1935, 30 August 1935, 12 December 1935, located at the Saunders County Courthouse, Wahoo, Nebraska; field inspection by Mary McCormick, 23 May 1990.

INVENTORIED BY

Lon Johnson, Renewable Technologies, Inc.

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Tri-State Canal Bridge
NDOR: C007900905P

SCOT01

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
county road over Tri-State Canal; S18, T23N, R57W
2.8 miles west of Morrill; Scotts Bluff County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 38)

CONDITION
good

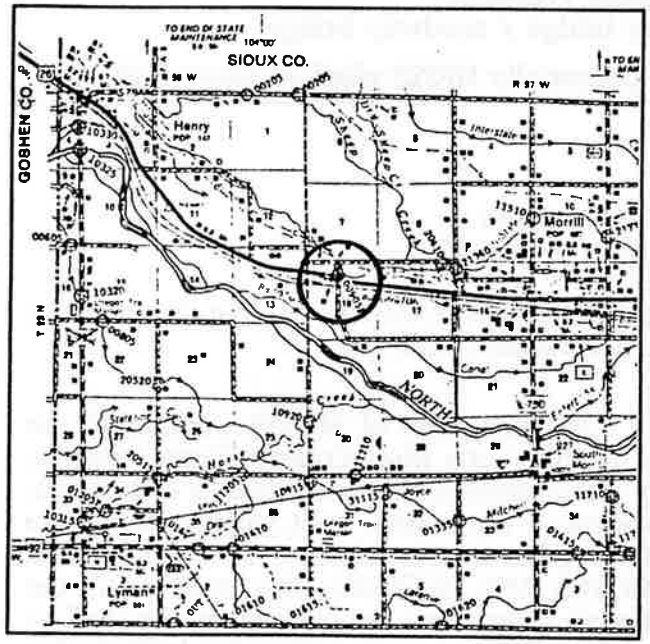
OWNER
Scotts Bluff County

span number:	1	superstructure:	steel, 5-panel, rigid-connected Pratt half-hip pony truss
span length:	70.0'	substructure:	steel pile bent abutments and piers with timber wingwalls
total length:	74.0'	floor/decking:	timber decking over steel stringers
roadway wdt.:	18.0'	other features:	upper chord: 2 angles; lower chord: 2 angles; vertical: 2 angles; diagonal: 2 angles; floor beam: I-beam, field bolted to vertical; guardrail: none

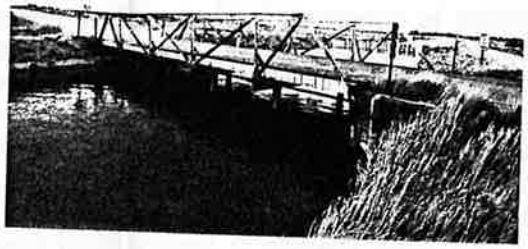
This bridge carries a gravel-surfaced county road across the Tri-State Canal approximately 2.8 miles west of Morrill. Although the structure's history is largely undocumented, it was probably built as a result of a resolution by the Scotts Bluff County Commissioners. Dated April 20, 1915, the resolution required canal owners to construct bridges where county roads intersected their diteches and canals. Subject to the approval of the road overseer or the county commissioners, these structures were to have been built within thirty days of the resolution. It is not clear whether this bridge was erected in 1915 as a direct result of this edict or at a subsequent date. Detailed and configured similarly to three other canal bridges in Scotts Bluff County (**SCOT04, SCOT05** AND **SCOT06**), this truss bears the earmarks of a ca.1915 structure. The bridge's non-standard design reflects its builder. Although Nebraska's counties were required by the state legislature in 1913 to use standard 20-ton capacity designs, the canal companies were not. Most such companies built timber pile bridges. Typically poorly constructed, these small-scale structures either collapsed or were later replaced by the counties by more substantial spans. The Tri-State Canal Bridge and the three other trusses in Scotts Bluff County are the only known examples in the state of steel truss erection by the canal companies. (Even three of these bridges have been subsequently bolstered by the addition of timber piles beneath the floor beams.) They are thus historically significant for its representation of this regional transportation trend.

NAME(S) OF STRUCTURE
Tri-State Canal Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C007900905P; Commissioners' Record for Scotts Bluff County, 20 April 1915, located at Scotts Bluff County Courthouse, Gering, Nebraska; field inspection by Clayton Fraser, 3 May 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Henry State Aid Bridge SCOT02
NDOR: C007910325; C007910330

DATE(S) OF CONSTRUCTION
1919; 1959

LOCATION
county road over the North Platte River; S3/4, T23N. R58W
0.6 mile south of Henry; Scotts Bluff County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 54)

CONDITION
good

OWNER
Scotts Bluff County

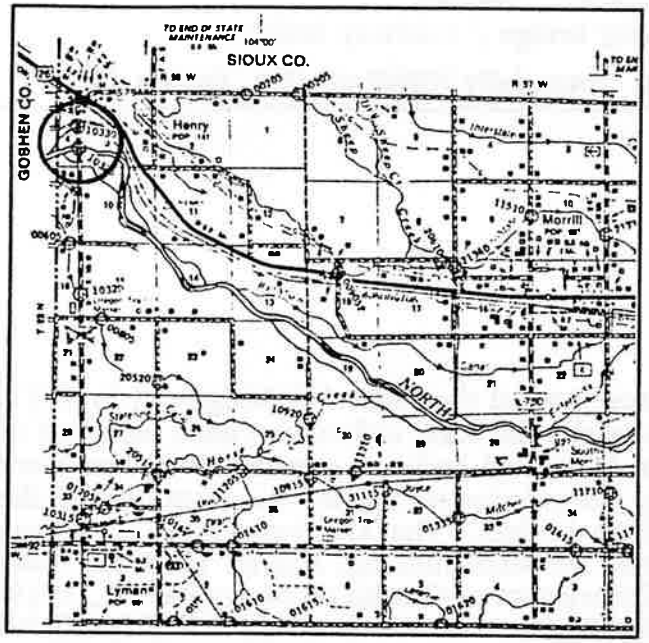
span number:	4	superstructure:	concrete filled spandrel arch
span length:	67.0'	substructure:	concrete abutments, wingwalls and piers over timber piles
total length:	351.0'	floor/decking:	asphalt over earth fill
roadway wdt.:	22.0'	other features:	guardrail: steel with concrete curb

To provide for bridge construction across the state's larger streams, the Nebraska Legislature passed the State Aid Bridge Act in 1911. The act established a fund to aid in the erection of bridges measuring at least 175 feet, whereby the state and county each paid half of a bridge's cost. Plans for such bridges were prepared by the State Engineer's Office on an individual basis, as standardized plans were not appropriate for large-scale river bridges. On July 12, 1916, the Scotts Bluff County Commissioners applied for state aid for the construction of two bridges over the North Platte at Henry, along with two other Platte River bridges. That October a bond to finance the county's share of the project was approved by local voters. The bridges were accepted for state funding, and by 1919 the State Engineer's Office had completed their design. A contract for the bridges was let to Allied Contractors of Omaha on September 16, 1919. Erected as two series of concrete arches, the Henry bridges were built for a total cost $83,726.82. The state's share of $7,789.63 fell inexplicably far short of the fifty percent match called for in the act. Both bridges are still in use, but their physical integrity has been compromised by a 1959 roadway widening.

Between the inception of the state aid bridge program in 1911 and the time it was phased out in 1936, the Nebraska State Engineer's office had designed and built 17 multiple-span concrete arch structures, most in the 1910s. Of these all but six of these have since been demolished, three of which span the North Platte River in Scotts Bluff County (the others: SCOT06 AND SCOT07). The Henry State Aid Bridges are thus significant as among the last of what was once a mainstay river bridge configuration in the state. The 1959 alterations have compromised the bridge's integrity somewhat, but this is mitigated by the historical importance of the bridge and by the fact that all but one of the existing state aid arches have also been widened at later dates.

NAME(S) OF STRUCTURE
Henry State Aid Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C007910325; **Nebraska State Aid Bridges,** Nebraska Department of Roads, July 1971; Commissioners' Record, Scotts Bluff County, 2 September 1919, 16 September 1919 and 22 December 1919, located at Scotts Bluff County Courthouse, Gering, Nebraska; field inspection by Clayton Fraser, 3 May 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Interstate Canal Bridge
NDOR: C007914525

SCOT03

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
county road over Interstate Canal; S6, T23N, R54W
9.3 miles north of Scottsbluff; Scotts Bluff County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 44)

CONDITION
good

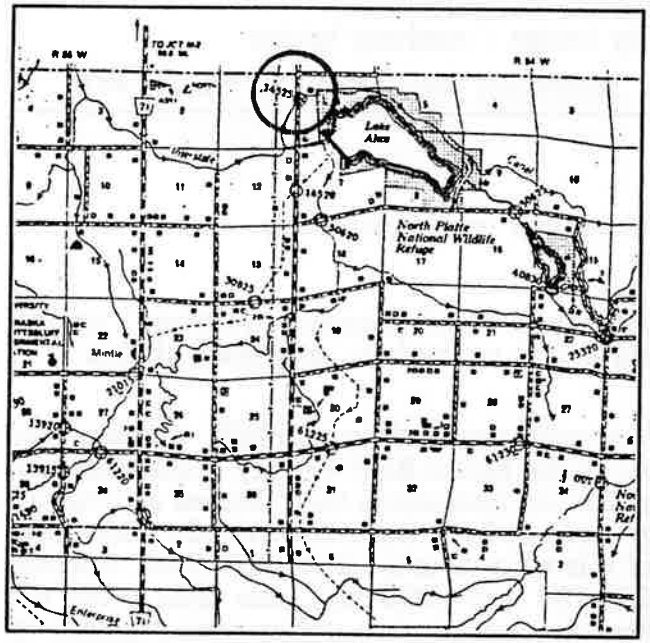
OWNER
Scotts Bluff County

span number:	1	superstructure:	steel, 6-panel, rigid-connected Pratt pony truss with upright endposts
span length:	53.0'	substructure:	concrete spread footings
total length:	55.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	15.0'	other features:	upper chord: 2 angles with continuous plates; lower chord: 2 angles; vertical: 2 angles; diagonal: 1 angle; floor beam: I-beam, field bolted to vertical; guardrail: timber

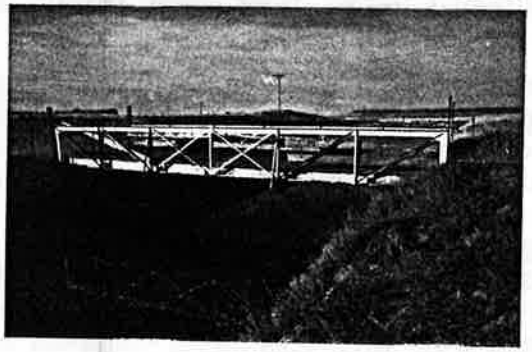
This bridge carries a gravel-surfaced county road across the Interstate Canal approximately 9.8 miles north of Scotts Bluff. Although the structure's history is largely undocumented, it was probably built as a result of a resolution by the Scotts Bluff County Commissioners. Dated April 20, 1915, the resolution required canal owners to construct bridges where county roads intersected their ditches and canals. Subject to the approval of the road overseer or the county commissioners, these structures were to have been built within thirty days of the resolution. It is not clear whether this bridge was erected in 1915 as a direct result of this edict or at a subsequent date. Detailed and configured similarly to three other canal bridges in Scotts Bluff County (**SCOT01, SCOT04** AND **SCOT05**), this truss bears the earmarks of a ca.1915 structure. The bridge's non-standard design reflects its builder. Although Nebraska's counties were required by the state legislature in 1913 to use standard 20-ton capacity designs, the canal companies were not. Most such companies built timber pile bridges. Typically poorly constructed, these small-scale structures either collapsed or were later replaced by the counties by more substantial spans. The Tri-State Canal Bridge and the three other trusses in Scotts Bluff County are the only known examples in the state of steel truss erection by the canal companies. (Even the three other bridges have been subsequently bolstered by the addition of timber piles beneath the floor beams.) They are thus historically significant for its representation of this regional transportation trend. This span over the Interstate Canal is technologically noteworthy for its structural configuration. Resembling a truss leg bedstead with its upright ends, the bridge is actually a simply supported pony truss - the only one of its type identified in the statewide bridge inventory.

NAME(S) OF STRUCTURE
Interstate Canal Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C007914525; Commissioners' Record for Scotts Bluff County, 20 April 1915, located at Scotts Bluff County Courthouse, Gering, Nebraska; field inspection by Clayton Fraser, 3 May 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Tri-State Canal Bridge
NDOR: C007921915

SCOT04

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
county road over Tri-State Canal; S13/14, T23N, R57W
1.8 miles east of Morrill; Scotts Bluff County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 38)

CONDITION
good

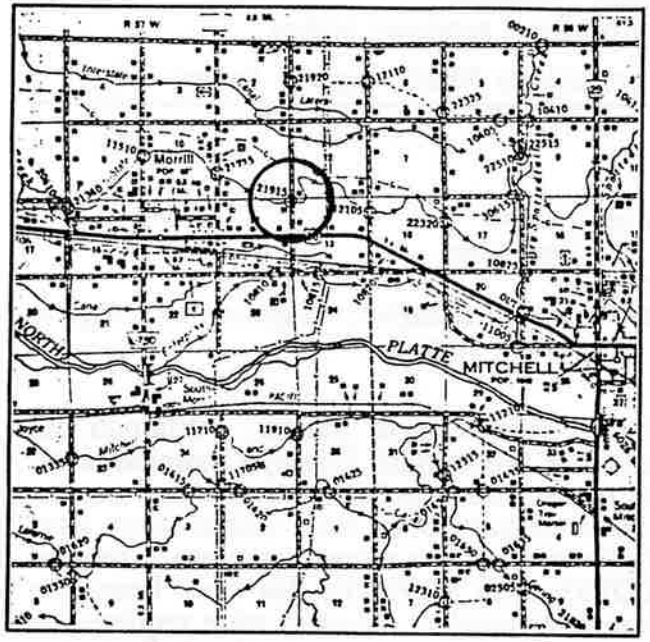
OWNER
Scotts Bluff County

span number:	1	superstructure:	steel, 5-panel, rigid-connected Pratt half-hip pony truss
span length:	70.0'	substructure:	timber abutments and wingwalls with steel pile bent piers
total length:	75.0'	floor/decking:	asphalt covered timber deck over timber stringers
roadway wdt.:	17.8'	other features:	upper chord: 2 angles; lower chord: 2 angles; vertical: 2 angles; diagonal: 1/2 angles; floor beam: I-beam, field bolted to vertical; guardrail: none

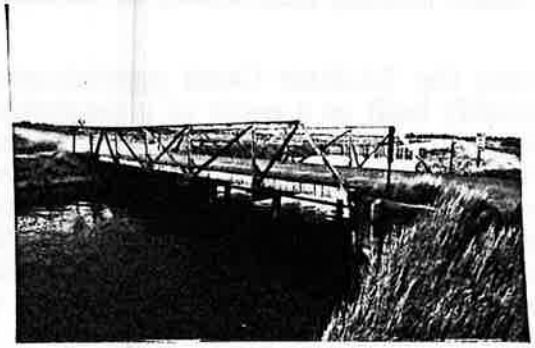
This bridge carries a gravel-surfaced county road across the Tri-State Canal approximately 1.8 miles east of Morrill. Although the structure's history is largely undocumented, it was probably built as a result of a resolution by the Scotts Bluff County Commissioners. Dated April 20, 1915, the resolution required canal owners to construct bridges where county roads intersected their ditches and canals. Subject to the approval of the road overseer or the county commissioners, these structures were to have been built within thirty days of the resolution. It is not clear whether this bridge was erected in 1915 as a direct result of this edict or at a subsequent date. Detailed and configured similarly to three other canal bridges in Scotts Bluff County (**SCOT01, SCOT03** AND **SCOT05**), this truss bears the earmarks of a ca.1915 structure. The bridge's non-standard design reflects its builder. Although Nebraska's counties were required by the state legislature in 1913 to use standard 20-ton capacity designs, the canal companies were not. Most such companies built timber pile bridges. Typically poorly constructed, these small-scale structures either collapsed or were later replaced by the counties by more substantial spans. The Tri-State Canal Bridge and the three other trusses in Scotts Bluff County are the only known examples in the state of steel truss erection by the canal companies. (Even three of these bridges have been subsequently bolstered by the addition of timber piles beneath the floor beams.) They are thus historically significant for its representation of this regional transportation trend.

NAME(S) OF STRUCTURE
Tri-State Canal Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C007921915; Commissioners' Record for Scotts Bluff County, 20 April 1915, located at Scotts Bluff County Courthouse, Gering, Nebraska; field inspection by Clayton Fraser, 3 May 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Tri-State Canal Bridge
NDOR: C007951215

SCOT05

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
county road over Tri-State Canal; S30/31, T23N, R55W
3.4 miles southeast of Mitchell; Scotts Bluff County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge /roadway bridge

RATING potentially NRHP eligible (score: 38)

CONDITION
good

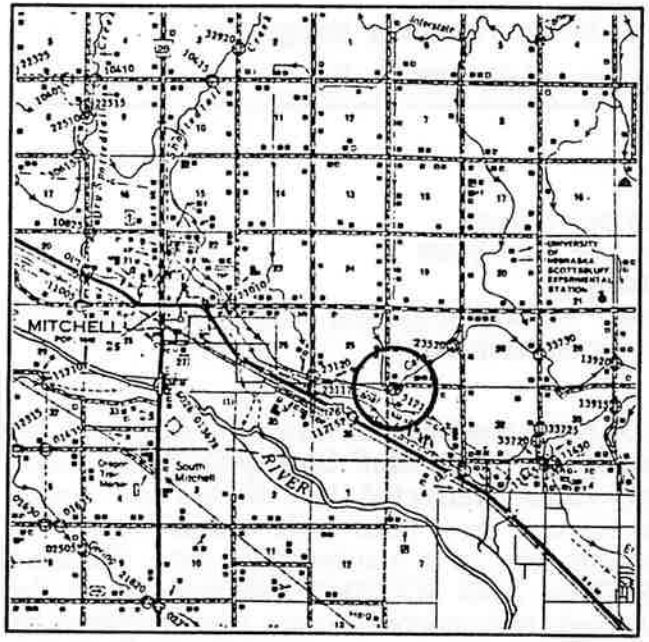
OWNER
Scotts Bluff County

span number:	1	superstructure:	steel, 5-panel, rigid-connected Pratt half-hip pony truss
span length:	70.0'	substructure:	timber abutments and wingwalls with steel pile bent piers
total length:	74.0'	floor/decking:	asphalt covered timber deck over timber stringers
roadway wdt.:	13.5'	other features:	upper chord: 2 angles; lower chord: 2 angles; vertical: 2 angles; diagonal: 1/2 angles; floor beam: I-beam, field bolted to vertical; guardrail: none

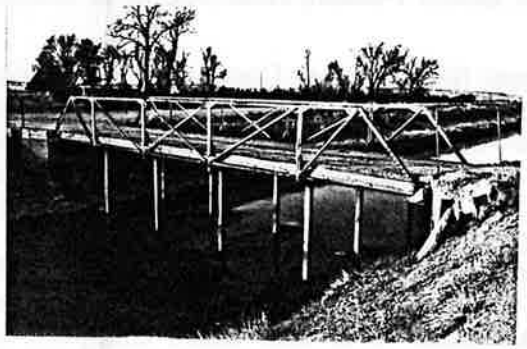
This bridge carries a gravel-surfaced county road across the Tri-State Canal approximately 3.4 miles southeast of Mitchell. Although the structure's history is largely undocumented, it was probably built as a result of a resolution by the Scotts Bluff County Commissioners. Dated April 20, 1915, the resolution required canal owners to construct bridges where county roads intersected their ditches and canals. Subject to the approval of the road overseer or the county commissioners, these structures were to have been built within thirty days of the resolution. It is not clear whether this bridge was erected in 1915 as a direct result of this edict or at a subsequent date. Detailed and configured similarly to three other canal bridges in Scotts Bluff County (**SCOT01**, **SCOT03** AND **SCOT04**), this truss bears the earmarks of a ca.1915 structure. The bridge's non-standard design reflects its builder. Although Nebraska's counties were required by the state legislature in 1913 to use standard 20-ton capacity designs, the canal companies were not. Most such companies built timber pile bridges. Typically poorly constructed, these small-scale structures either collapsed or were later replaced by the counties by more substantial spans. The Tri-State Canal Bridge and the three other trusses in Scotts Bluff County are the only known examples in the state of steel truss erection by the canal companies. (Even three of these bridges have been subsequently bolstered by the addition of timber piles beneath the floor beams.) They are thus historically significant for its representation of this regional transportation trend.

NAME(S) OF STRUCTURE
Tri-State Canal Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C007951215; Commissioners' Record for Scotts Bluff County, 20 April 1915, located at Scotts Bluff County Courthouse, Gering, Nebraska; field inspection by Clayton Fraser, 3 May 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Morrill State Aid Bridge SCOT06
NDOR: SL79D00185

DATE(S) OF CONSTRUCTION
1918-19; 1952; 1971

LOCATION
State Link 79D over the North Platte River; S26/27, T23N, R57W
2.3 miles south of Morrill; Scotts Bluff County, Nebraska

USE (ORIGINAL / CURRENT)
highway bridge / highway bridge

RATING determined NRHP non-eligible (score: 49)

CONDITION
good

OWNER
Nebraska Department of Roads

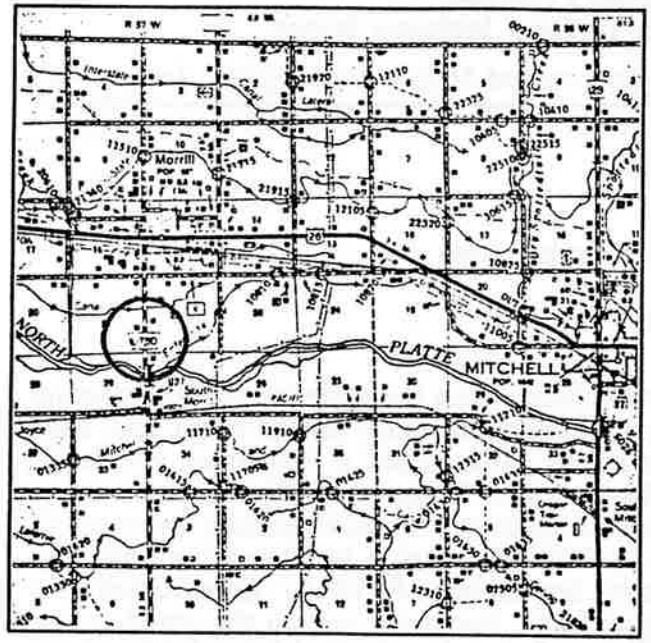
span number:	7	superstructure:	concrete filled spandrel arch
span length:	54.0'	substructure:	concrete abutments, wingwalls and piers over timber piles
total length:	646.0'	floor/decking:	asphalt over earth fill
roadway wdt.:	22.0'	other features:	guardrail: steel angle with concrete curbing

On July 12, 1916, Scotts Bluff County Commissioners applied to the Nebraska State Engineer for funds from the state aid bridge program to help erect this bridge at Morrill, along with two other North Platte crossings at Henry and Mitchell. The Bridge Fund had been enacted by the State legislature in 1911 to help finance the spanning of Nebraska's larger streams. It initiated a fund from which the state paid half the cost of bridges over 175 feet. Such bridges were designed individually by the State Engineer's Office as there were no standardized plans for large-scale river bridges. On October 18, 1916, local citizens voted to approve a bond financing the county's share of building the North Platte bridges. The project was accepted for state funding, and by 1919 the design had been completed by the State Engineer's Office. A construction contract was let to Allied Contractors of Omaha on September 16, 1919. Constructed as a series of twelve 50-foot concrete arches, the Morrill bridge was built for a total cost of $83,412.43. For some reason the state's share of $8,443.99 fell far short of the fifty percent match called for in the act. The bridge is still in use, but its physical integrity has been marred severely by a deck widening in 1952 and by the piecemeal replacement of three original arch spans after their collapse in 1971.

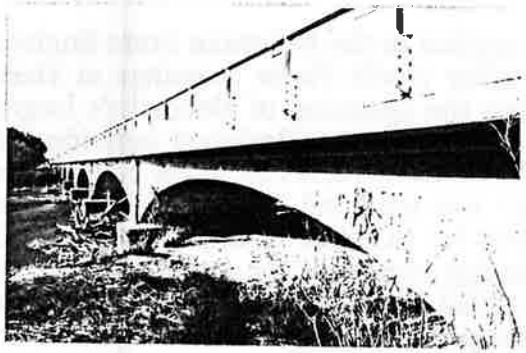
Between the inception of the state aid bridge program in 1911 and the time it was phased out in 1936, the Nebraska State Engineer's office had designed and built 17 multiple-span concrete arch structures, most in the 1910s. Of these all but six of these have since been demolished, three of which span the North Platte River in Scotts Bluff County (the others: **SCOT02** AND **SCOT07**). The Morrill State Aid Bridge is thus significant as among the last of what was once a mainstay river bridge configuration in the state. The 1952 and 1971 alterations have compromised the bridge's integrity severely, and as a result it has been determined non-eligible for the National Register.

NAME(S) OF STRUCTURE
Morrill State Aid Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number SL79D00185; **Nebraska State Aid Bridges**, Nebraska Department of Roads, June 1971; Commissioners' Record for Scotts Bluff County, 2 September 1919, 16 September 1919 and 22 December 1919, located at Scotts Bluff County Courthouse, Gering, Nebraska; field inspection by Clayton Fraser, 3 May 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Mitchell State Aid Bridge SCOT07
NDOR: S026 01367R

DATE(S) OF CONSTRUCTION
1918-19

LOCATION
State Highway ~~26~~ 29 over the North Platte River; S33/34, T23N, R56W
1.2 miles south of Mitchell; Scotts Bluff County, Nebraska

USE (ORIGINAL / CURRENT)
highway bridge / highway bridge

RATING potentially NRHP eligible (score: 54)

CONDITION
good

OWNER
Nebraska Department of Roads

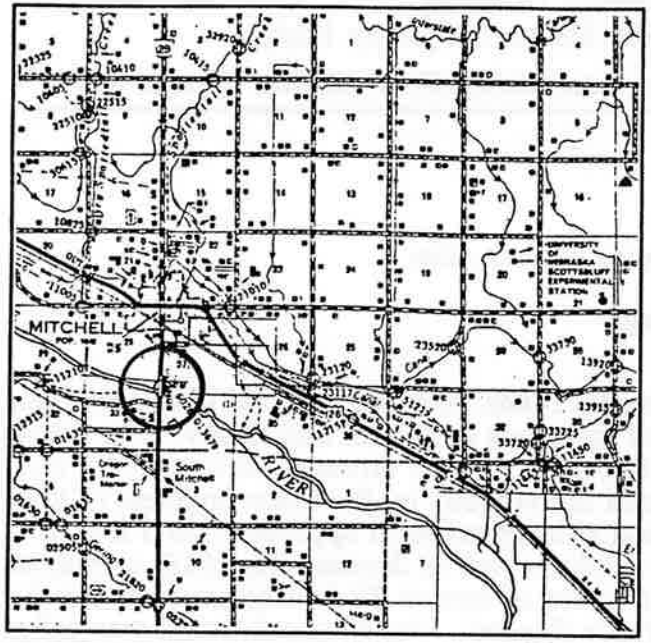
span number:	12	superstructure:	concrete filled spandrel arch
span length:	54.0'	substructure:	concrete abutments, wingwalls and piers over timber piles
total length:	670.0'	floor/decking:	asphalt over concrete
roadway wdt.:	24.3'	other features:	guardrail: steel angle with concrete curbing

On July 12, 1916, Scotts Bluff County Commissioners applied to the Nebraska State Engineer for funds from the state aid bridge program to help erect this bridge over the North Platte at Mitchell, along with two other Platte River crossings at Morrill and Henry. The Bridge Fund had been enacted by the State legislature in 1911 to help finance the spanning of Nebraska's larger streams. It initiated a fund from which the state paid half the cost of bridges over 175 feet. Such bridges were designed individually by the State Engineer's Office as there were no standardized plans for large-scale river bridges. On October 18, 1916, local citizens voted to approve a bond financing the county's share of building the North Platte bridges. The project was accepted for state funding, and on January 21, 1918, a contract for the Mitchell Bridge was let to the Omaha Structural Steel Works. It was erected as a series of twelve 50-foot concrete arches for a total cost of $59,442.04, of which the state paid $30,675.19. In June 1921, the North Platte flooded. The National Guard was called out and worked successfully to protect the approaches to the bridge. The roadway was widened in 1939, and footings repaired in 1959, but the bridge is otherwise intact.

Between the inception of the state aid bridge program in 1911 and the time it was phased out in 1936, the Nebraska State Engineer's office had designed and built 17 multiple-span concrete arch structures, most in the 1910s. Of these all but six of these have since been demolished, three of which span the North Platte River in Scotts Bluff County (the others: **SCOT02** AND **SCOT07**). The Mitchell State Aid Bridge is thus significant as among the last of what was once a mainstay river bridge configuration in the state. The 1959 alterations have compromised the bridge's integrity somewhat, but this is mitigated by the historical and technological importance of the bridge and by the fact that all but one of the existing state aid arches have also been widened at later dates.

NAME(S) OF STRUCTURE
Mitchell State Aid Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Nebraska Number S026 01367R; **Nebraska State Aid Bridges**, Nebraska Department of Roads, July 1971; Commissioners' Record for Scotts Bluff County, 20 December 1917 and 21 January 1918, located at Scotts Bluff County Courthouse, Gering, Nebraska; field inspection by Clayton Fraser, 3 May 1988.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Big Blue River Bridge
NDOR: C008000610

DATE(S) OF CONSTRUCTION
SEWA01 ca.1910

LOCATION
county highway over the Big Blue River; S10/15, T12N, R2E
3.0 miles northwest of Staplehurst; Seward County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 10)

CONDITION
fair

OWNER
Seward County

span number: 1
span length: 90.0'
total length: 111.0'
roadway wdt.: 15.6'

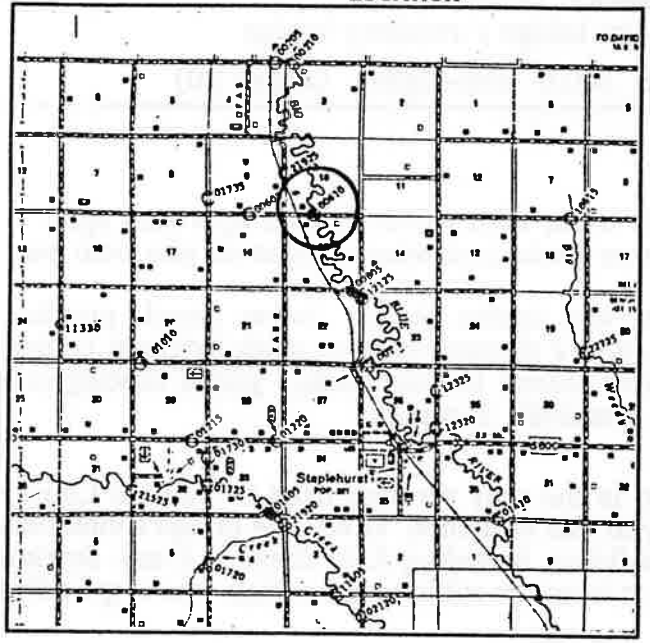
superstructure: steel, 5-panel, pin-connected Pratt through truss, with wood stringer approach span
substructure: timber/steel pile bent abutments with timber back- and wingwalls; steel pile bent pier
floor/decking: timber deck over I-beam stringers
other features: upper chord: 2 channels with cover plate and batten plates; lower chord: punched eyebars; vertical: punched eyebars at hip, and 2 channel sections with lacing at center; diagonal: punched eyebars; top and bottom lateral bracing: rods; portal bracing and strut: pair angles; floor beam: I-beams; guardrail: 2 angles.

This through truss bridge, which carries an unpaved county road over the Big Blue River, is the only through truss in Seward County included in the Nebraska Historic Bridge Inventory. County records do not refer specifically to this structure. Given the bridge's materials and design, it was probably built in the first decade of the 20th century. Several bridge builders, including J.M. Sheeley, Frank Stocker and the Standard Bridge Company erected bridges in Seward County during this period, so it is not possible to tell which was responsible for this bridge's construction.

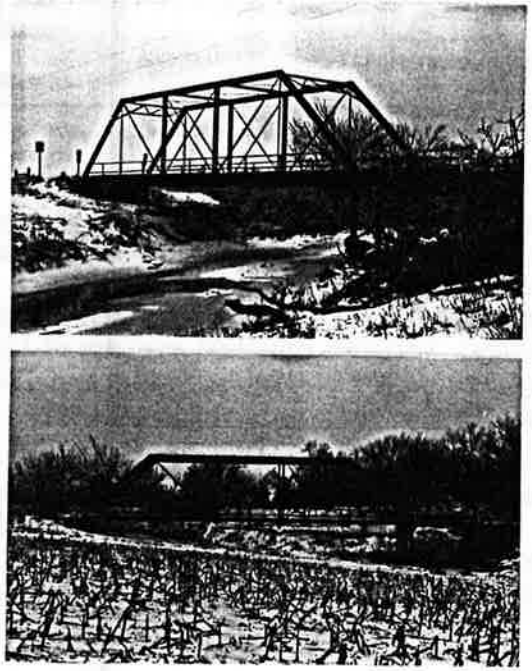
The Pratt was the most common type of through truss built in Nebraska. Given structural modifications and lack of historical documentation, the bridge is of minimal significance.

NAME(S) OF STRUCTURE
Big Blue River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C008000610; Seward County Board of Supervisors' Records, 1898-1920, located in the Seward County Courthouse, Seward, Nebraska; field inspection by Mary McCormick, 2 March 1989.

INVENTORIED BY
Mary McCormick, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Big Blue Bridge
NDOR: C008000805

SEWA02

DATE(S) OF CONSTRUCTION
ca.1920

LOCATION
county highway over the Big Blue River; S15/22, T12N, R2E
2.0 miles north of Staplehurst; Seward County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge \ roadway bridge

RATING NRHP non-eligible (score: 18)

CONDITION
good

OWNER
Seward County

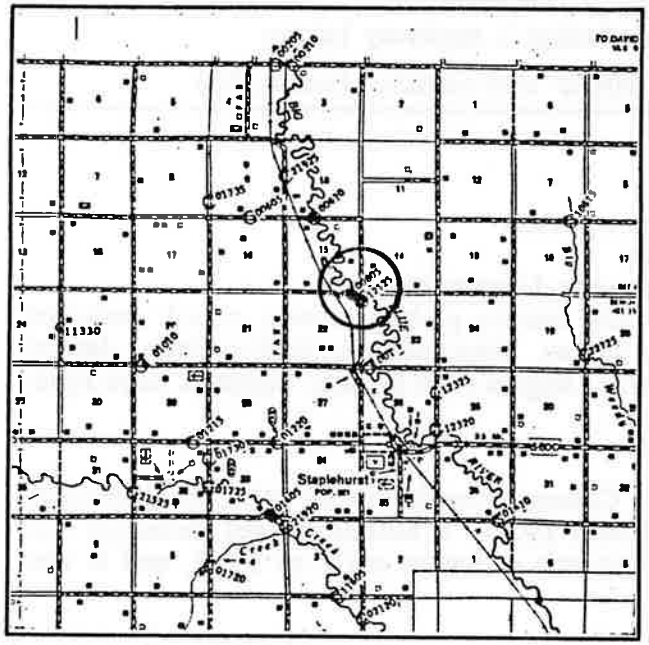
span number:	1	superstructure:	steel, 5-panel, pin- / rigid-connected Pratt pony truss
span length:	90.0'	substructure:	I-beam pile with timber back- and wingwalls
total length:	91.0'	floor/decking:	corrugated steel with gravel wearing surface over I-beam stringers
roadway wdt.:	15.7'	other features:	upper chord: 2 channels with cover plate and batten plates; lower chord: punched eyebars; vertical: 2 pair angles with batten plates; diagonal: punched eyebars; lateral bracing: rods; floor beam: I-beams; guardrail: 2 angles with lattice; verticals have rigid-connections, all other connections are pin

This Pratt pony truss carries an unpaved road over the Big Blue River north of Staplehurst. County records do not refer specifically to this structure. Given the bridge's materials and design, however, it appears to date from about 1920. A standard plan including this combination of pinned and riveted connections may have been available from the state engineer's office as early as 1913, and it was certainly in use by the mid-1920s.

This is a typical pony truss, probably designed from state standard plans and dating from the mid-1910s to the mid-1920s. A number of similar structures survive in Nebraska. Alteration of the verticals harms the bridge's integrity.

NAME(S) OF STRUCTURE
Big Blue Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C008000805; Seward County Board of Supervisors' Records, 1898-1920, located in the Seward County Courthouse, Seward, Nebraska; field inspection by Mary McCormick, 2 March 1989.

INVENTORIED BY
Mary McCormick, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Big Blue River Bridge
NDOR: C008001115

SEWA03

DATE(S) OF CONSTRUCTION
ca.1925

LOCATION
county highway over the Big Blue River; S11/12, T9N, R1E
0.2 miles south of Beaver Crossing; Seward County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge \ roadway bridge

RATING NRHP non-eligible (score: 22)

CONDITION
good

OWNER
Seward County

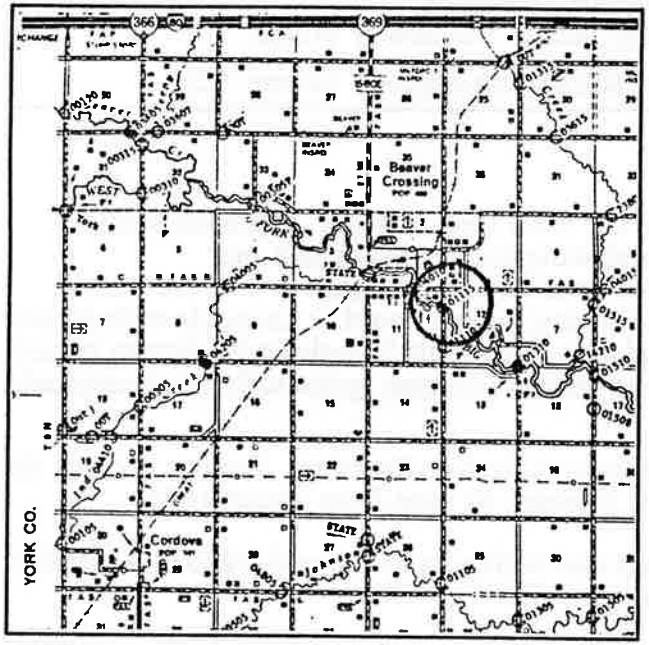
span number:	1	superstructure:	steel, 5-panel, rigid-connected Pratt pony truss with steel stringer approach span
span length:	100.0'	substructure:	I-beam pile abutments with timber back- and wingwalls; I-beam pile pier
total length:	131.0'	floor/decking:	corrugated steel with gravel wearing surface over I-beam stringers
roadway wdt.:	17.6'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 channels with batten plates; vertical: 2 pair angles with batten plates; diagonal: 2 angles with batten plates; lateral bracing: rods; strut: steel plates; floor beams: I-beams; guardrail: small channels

This Pratt pony truss carries an unpaved north-south road over the Big Blue River just southeast of Beaver Crossing. County records do not refer specifically to this structure. Given the bridge's materials and design, however, it appears to date from about 1925.

The Big Blue River Bridge is a typical pony truss, probably designed from state standard plans and dating from the mid-1920s. A number of similar structures survive in Nebraska, including **SEWA04** and **SEWA07** in Seward County.

NAME(S) OF STRUCTURE
Big Blue River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C008001115; Seward County Board of Supervisors' Records, 1898-1920, located in the Seward County Courthouse, Seward, Nebraska; field inspection by Mary McCormick, 2 March 1989.

INVENTORIED BY	AFFILIATION	DATE
Mary McCormick, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Big Blue River Bridge
NDOR: C008001310

SEWA04

DATE(S) OF CONSTRUCTION
ca.1925

LOCATION
county highway over West Fork of Big Blue River; Corner S12/7/13/18, T9N, R1/2E
1.0 miles southeast of Beaver Crossing; Seward County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 22)

CONDITION
good

OWNER
Seward County

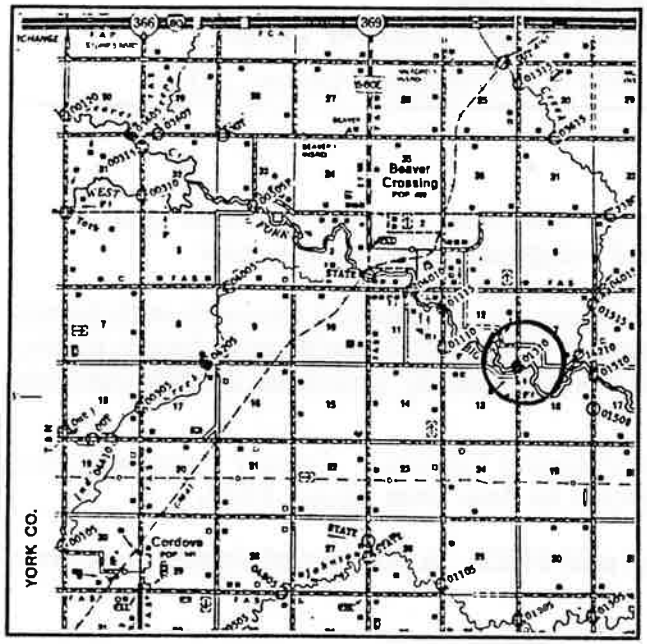
span number:	1	superstructure:	steel, 5-panel, rigid-connected Pratt pony truss with steel stringer approach span
span length:	100.0'	substructure:	I-beam pile abutments with timber back- and wingwalls; I-beam pile pier
total length:	131.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	17.7'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 channels with batten plates; vertical: 2 pair angles with batten plates; diagonal: 2 angles with batten plates; lateral bracing: rods; strut: steel plate; floor beam: I-beams; guardrail: 2 small channels

This Pratt pony truss carries an unpaved east-west road over the Big Blue River southeast of Beaver Crossing. County records do not refer specifically to this structure. Given the bridge's materials and design, however, it appears to date from about 1925.

This is a typical pony truss, probably designed from state standard plans and dating from the mid-1920s. A number of similar structures survive in Nebraska, including **SEWA03** and **SEWA07** in Seward County.

NAME(S) OF STRUCTURE
Big Blue River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C008001310; Seward County Board of Supervisors' Records, 1898-1920, located in the Seward County Courthouse, Seward, Nebraska; field inspection by Mary McCormick, 8 March 1990

INVENTORIED BY
Mary McCormick, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Lincoln Creek Bridge
NDOR: C008001405

SEWA05

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
county Highway over Lincoln Creek; S4/33, T11/12N, R2E
1.2 miles southwest of Staplehurst; Seward County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 18)

CONDITION
fair

OWNER
Seward County

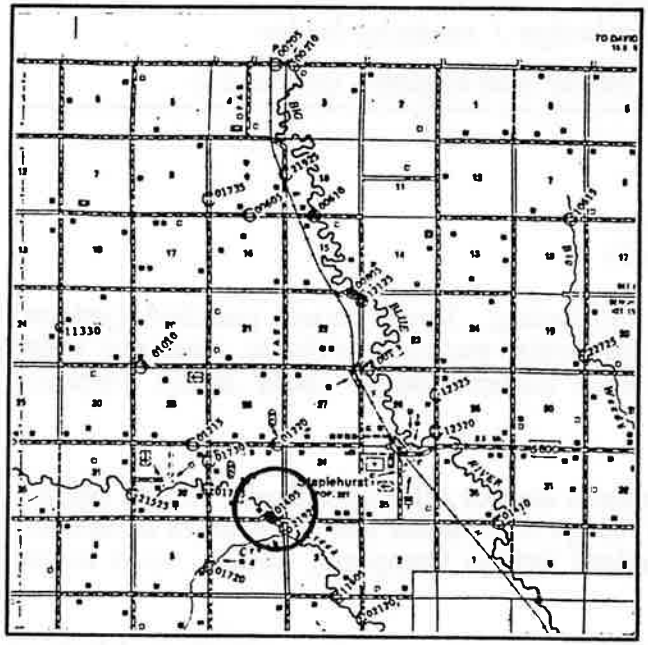
span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt pony truss
span length:	70.0'	substructure:	I-beam piles with timber back- and wingwalls
total length:	72.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.6'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: punched eyebars; vertical: 2 pair angles with batten plates; diagonals: punched eyebars; counters: rods; lateral bracing: rods; strut: pair angles with batten plates; floor beam: I-beams; guardrail: 2 channels

This pin-connected Pratt pony truss carries an unpaved road over Lincoln Creek. County records do not refer specifically to this bridge. Given the structure's materials and design, it appears to date from the mid-1910s. Several bridge companies erected bridges in Seward County during this period, including J.M. Sheeley of Fort Collins, Colorado, and the Standard Bridge Company, Omaha, so it is not possible to determine which company was responsible for its erection.

This is a typical pony truss, designed from state standard plans and dating from the mid-1910s. Alterations to the verticals and lack of documentation about its construction diminish its significance.

NAME(S) OF STRUCTURE
Lincoln Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C008001405; Seward County Board of Supervisors' Records, 1898-1920, located in the Seward County Courthouse, Seward, Nebraska; field inspection by Mary McCormick, 7 March 1989.

INVENTORIED BY	AFFILIATION	DATE
Mary McCormick, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Big Blue River Bridge
NDOR: C008001815

SEWA06

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
COLL 21C over the Big Blue River; S8/17, T11N, R3E
0.75 miles northeast of Seward; Seward County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 20)

CONDITION
fair

OWNER
Seward County

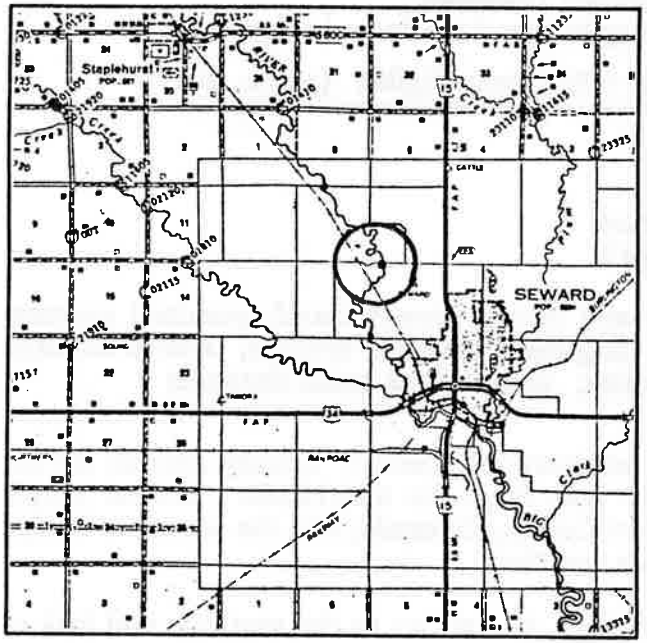
span number:	1	superstructure:	steel, 5-panel, pin-connected Pratt pony truss
span length:	90.0'	substructure:	I-beam piles with timber back- and wingwalls
total length:	92.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.8'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: punched eyebars; vertical: 2 pair angles with batten plates; diagonals: punched eyebars; lateral bracing: rods; strut: pair angles; floor beam: I-beams; guardrail: 2 small channels

This pin-connected Pratt pony truss carries an unpaved road over the Big Blue River just northeast of Seward. County records do not refer specifically to this bridge. Given the structure's materials and design, it appears to date from the mid-1910s. Several bridge companies erected bridges in Seward County during this period, including J.M. Sheeley of Fort Collins, Colorado, and the Standard Bridge Company, Omaha, so it is not possible to determine which company was responsible for its erection.

This is a typical pony truss, designed from state standard plans and dating from the mid-1910s. Alterations to the verticals and lack of documentation about its construction diminish its significance.

NAME(S) OF STRUCTURE
Big Blue River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C008001815; Seward County Board of Supervisors' Records, 1898-1920, located in the Seward County Courthouse, Seward, Nebraska; field inspection by Mary McCormick, 7 March 1989.

INVENTORIED BY	AFFILIATION	DATE
Mary McCormick, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Big Blue River Bridge
NDOR: C008002010

SEWA07

DATE(S) OF CONSTRUCTION
ca.1925

LOCATION
county highway over the Big Blue River; S18/19, T11N, R3E
0.5 mile west of Seward; Seward County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 22)

CONDITION
good

OWNER
Seward County

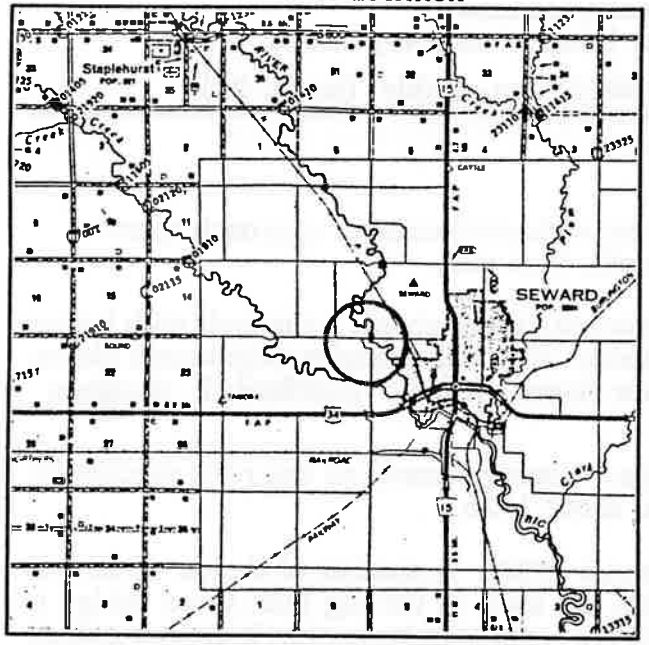
span number:	1	superstructure:	steel, 5-panel, rigid-connected Pratt pony truss with steel stringer approach spans
span length:	100.0'	substructure:	concrete abutments and wingwalls; I-beam pile bent piers
total length:	177.0'	floor/decking:	concrete deck over I-beam stringers
roadway wdt.:	19.0'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 channels with batten plates; vertical: 2 pair angles with batten plates; diagonal: 2 angles with batten plates; lateral bracing: rods; strut: steel plate; floor beam: I-beams; guardrail: 2 channels

This riveted Pratt pony truss carries an east-west unpaved road over the Big Blue River Bridge. County records do not refer specifically to this structure. Given the bridge's materials and design, however, it appears to date from about 1925.

This is a typical pony truss, probably designed from state standard plans and dating from the mid-1920s. A number of similar structures survive in Nebraska, including **SEWA03** and **SEWA04** in Seward County. Like these bridges, the span of the Big Blue River Bridge is 100 feet. However, it features a wider roadway and, because of the addition of five steel stringer approach spans, has a greater overall length.

NAME(S) OF STRUCTURE
Big Blue River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C008002010; Seward County Board of Supervisors' Records, 1898-1920, located in the Seward County Courthouse, Seward, Nebraska; field inspection by Mary McCormick, 7 March 1989.

INVENTORIED BY	AFFILIATION	DATE
Mary McCormick, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Big Blue River Bridge SEWA08
NDOR: C008002505

DATE(S) OF CONSTRUCTION
ca.1908

LOCATION
county highway over West Fork of Big Blue River; S25/30, T9N, R3E
5.5 miles southwest of Milford; Seward County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 31)

CONDITION
good

OWNER
Seward County

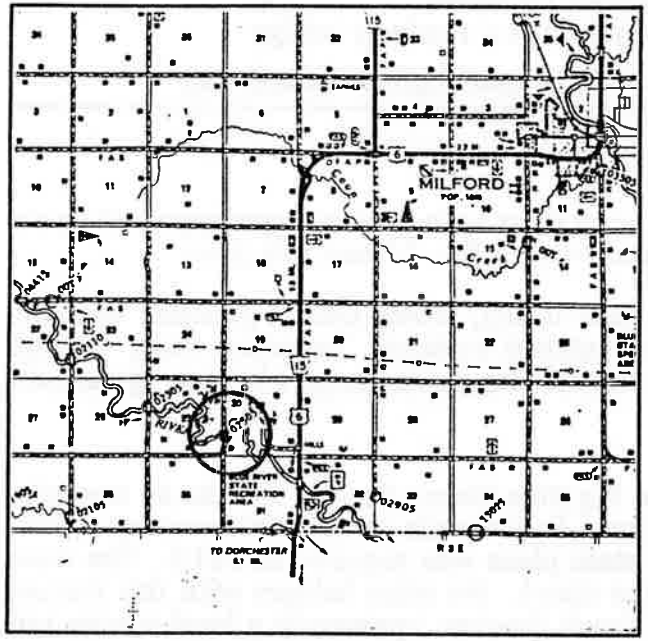
span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt half-hip pony truss with steel stringer approach spans
span length:	60.0'	substructure:	I-beam pile abutments with timber back- and wingwalls; I-beam pile piers
total length:	119.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	13.7'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: punched eyebars; vertical: 2 angles with lacing; diagonals: punched eyebars; counters: rods; lateral bracing: rods; floor beams: small I-beams bolted atop wide-flange I-beams; guardrail: 2 angles; bolt-connections at endposts

This half-hip Pratt pony truss carries an unpaved north-south road over the West Fork of the Big Blue River. County records do not refer specifically to this bridge. Given the structure's materials and design, it appears to date from first decade of the 20th century. Half-hip trusses were not included in state standard plans, and were thus not built after use of state plans was required in 1913. The truss features an unusual detail: verticals pierce the hips and are connected by bolts on top of the chord. No other bridges with this feature were included in the Seward County survey. This suggests that the truss was the work of Frank Stocker, apparently a local contractor, who received the county's annual bridge erection contract in only one year, 1908. Nothing further is known about Stocker.

Because the half-hip truss did not have verticals at the hips, it used less material and was therefore less expensive. This style was popular in Nebraska in the late 19th and early 20th centuries, and numerous examples still survive. This bridge is distinguished by the unusual bolted connection of the verticals, and is thus significant as an atypical execution of this common style.

NAME(S) OF STRUCTURE
Big Blue River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C008002505; Seward County Board of Supervisors' Records, 1898-1920, located in the Seward County Courthouse, Seward, Nebraska; field inspection by Mary McCormick, 6 March 1989.

INVENTORIED BY
Mary McCormick, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Crooked Creek Bridge SEWA09
NDOR: C008002905P

DATE(S) OF CONSTRUCTION
ca.1920

LOCATION
county highway over Crooked Creek; Center N1/2, S16, T10N, R3E
4.2 miles south of Seward; Seward County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 20)

CONDITION
good

OWNER
Seward County

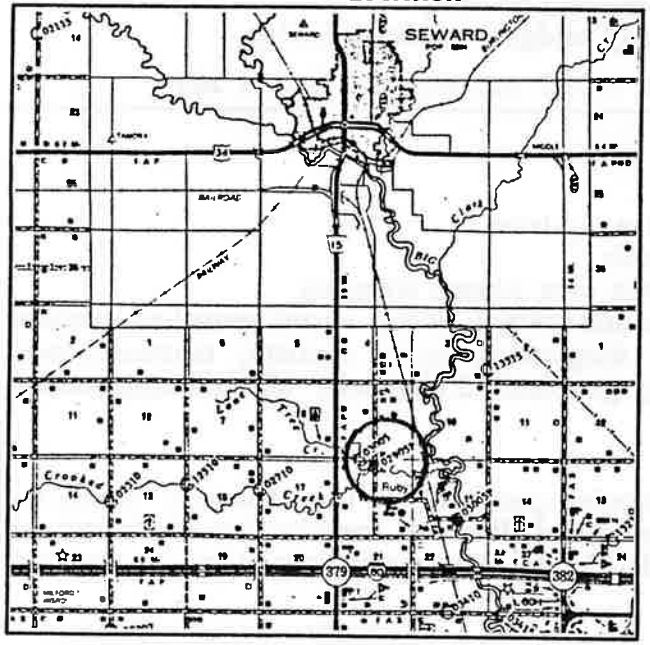
span number:	1	superstructure:	steel, 4-panel, pin- / rigid-connected Pratt pony truss
span length:	60.0'	substructure:	I-beam pile with timber back- and wingwalls
total length:	61.0'	floor/decking:	corrugated steel with gravel wearing surface over I-beam stringers
roadway wdt.:	15.5'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: punched eyebars; vertical: 2 pair angles with batten plates; diagonal: punched eyebars; counters: rods; lateral bracing: rods; floor beam: I-beams; guardrail: 2 channels; all rigid-connections, except verticals/upper chord

This Pratt pony truss carries an unpaved road over Crooked Creek. County records do not refer specifically to this structure. Given the bridge's materials and design, however, it appears to date from about 1920. A standard plan including this combination of pinned and riveted connections may have been available from the state engineer's office as early as 1913, and it was certainly in use by the mid-1920s.

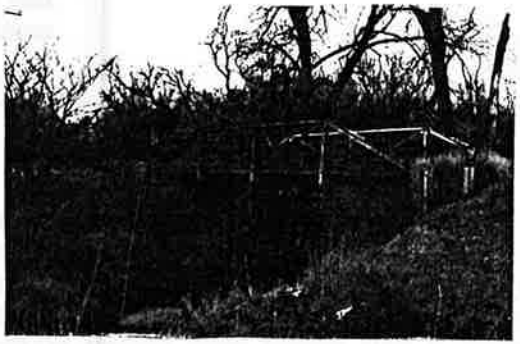
This is a typical pony truss, probably designed from state standard plans and dating from the mid-1910s to the mid-1920s. A number of similar structures survive in Nebraska.

NAME(S) OF STRUCTURE
Crooked Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C008002905P; Seward County Board of Supervisors' Records, 1898-1920, located in the Seward County Courthouse, Seward, Nebraska; field inspection by Mary McCormick, 7 March 1989.

INVENTORIED BY
Mary McCormick, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Big Blue River Bridge
NDOR: C008003005P

SEWA10

DATE(S) OF CONSTRUCTION
ca.1915; moved 1933

LOCATION
county highway over the Big Blue River; SE1/4, S15, T10N, R3E
0.5 mile east-southeast of Ruby; Seward County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING determined NRHP non-eligible (score: 18)

CONDITION
good

OWNER
Seward County

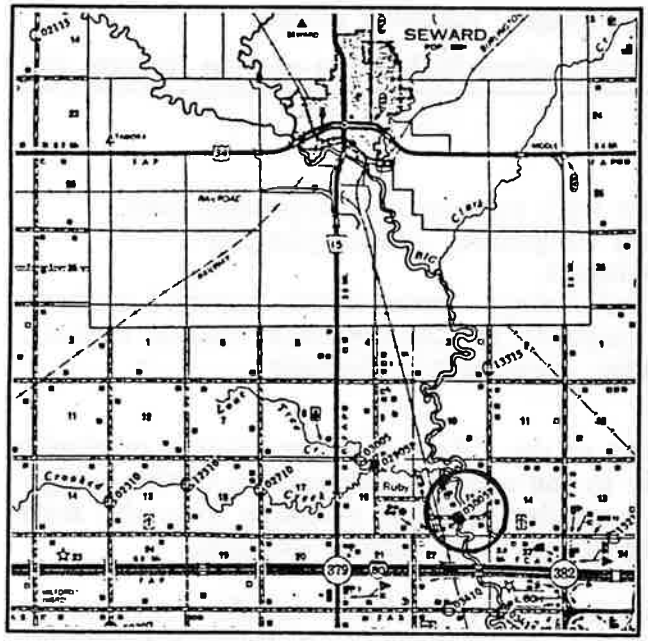
span number:	1	superstructure:	steel, 5-panel, pin-connected Pratt pony truss with steel stringer approach span
span length:	100.0'	substructure:	I-beam pile abutments with timber back- and wingwalls; I-beam pile pier
total length:	120.0'	floor/decking:	concrete on corrugated steel over I-beam stringers
roadway wdt.:	15.9'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: punched eyebars; vertical: 2 pair angles with batten plates; diagonal: punched eyebars; lateral bracing: rods; strut: pair angles; floor beam: I-beams; guardrail: 2 channels

This pin-connected Pratt pony truss carries an unpaved road over the Big Blue River just east of the village of Ruby. It was originally located in the east part of Section 31, Township O. County records do not refer specifically to the original construction of this bridge. Given the structure's materials and design, it appears to date from the mid-1910s, and is similar to plans available from the state engineer's office at that time. In 1933, the county hired the Gilmore Company to move the bridge to its current location.

With a 100-foot span, this bridge displays the maximum length for which this type of truss was usually specified. Similar Pratt trusses were common in Nebraska in the early 20th century, and a number of them survive. Lack of documentation about the bridge's construction diminishes its significance.

NAME(S) OF STRUCTURE
Big Blue River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C008003005P; Seward County Supervisors' Records, 1898 to 1920, and 7 March 1933, located at the Seward County Courthouse, Seward, Nebraska; field inspection by Mary McCormick, 7 March 1989.

INVENTORIED BY
Mary McCormick, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Beaver Creek Bridge
NDOR: C008003605

SEWA11

DATE(S) OF CONSTRUCTION
ca.1900

LOCATION
county highway over Beaver Creek; S30/31, T10N, R1E
3.0 miles northwest of Beaver Crossing; Seward County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING determined NRHP non-eligible (score: 23)

CONDITION
good

OWNER
Seward County

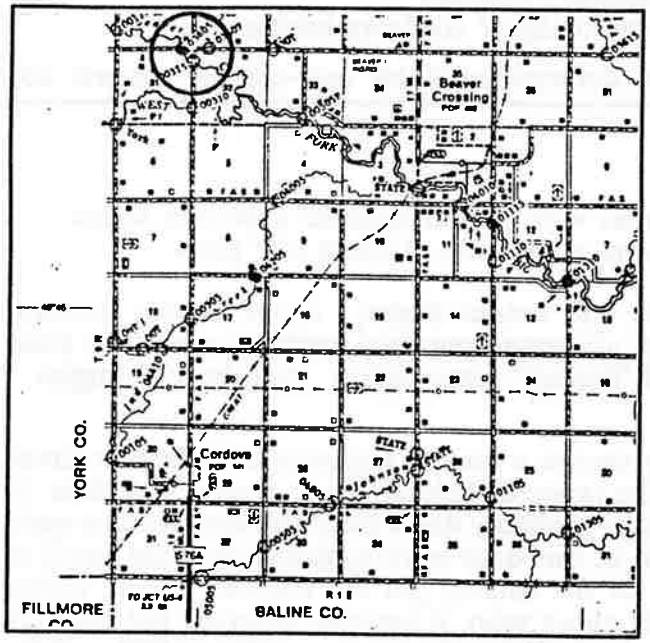
span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt pony truss with timber stringer approach spans
span length:	60.0'	substructure:	I-beam pile abutments with timber back- and wingwalls; I-beam pile piers
total length:	106.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	13.6'	other features:	upper chord: 2 channels with cover plate and batten plates; lower chord: punched eyebars; vertical: 2 pair angles with lacing; diagonal: punched eyebars; counters: rods; lateral bracing: rods; floor beam: tapered "fishtail" plate girder; guardrail: 2 angles

Located between Sections 30 and 31 in Township 10N, Range 1E, this pinned Pratt pony carries a county highway over Beaver Creek northwest of Beaver Crossing. County records do not refer specifically to this bridge. The tapered "fishtail" floor beams and their U-bolt connections to the superstructure, as well as the timber stringers, indicate that the bridge probably dates from the late 19th or early 20th century. The Board awarded their annual bridge contract for "iron" structures (which at this date were probably actually steel) to J.H. Sparks from 1898. In 1901 J.M. Sheeley, who had previously built wooden bridges for the county, got the contract for all bridge work for the year and, subsequently for 1902, 1905 and 1906. No information is available about who, if anyone, received the contract in 1903, 1904 and 1907. Frank Stocker was awarded the contract in 1908, and the Standard Bridge Company got it in 1909 and for several years thereafter. Any of these builders could have been responsible for erecting the structure.

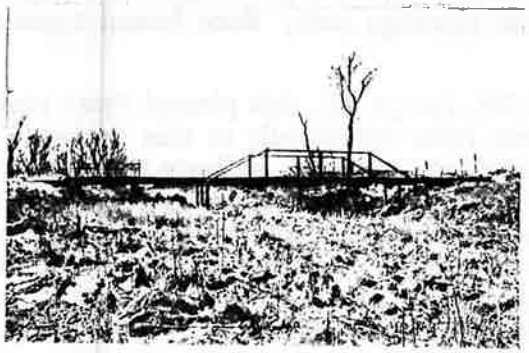
The Pratt pony truss was the most popular truss style in early 20th century Nebraska. A number of examples survive. Alterations to the verticals of this bridge, as well as lack of documentation about its construction, diminish the structure's significance.

NAME(S) OF STRUCTURE
Beaver Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C008003605; Seward County Board of Supervisors' Records, 1898-1920, located in the Seward County Courthouse, Seward, Nebraska; field inspection by Mary McCormick, 7 March 1990

INVENTORIED BY
Mary McCormick, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Big Blue River Bridge
NDOR: C008003710

SEWA12

DATE(S) OF CONSTRUCTION
central span, ca.1915; approach spans, ca.1920

LOCATION
county highway over the Big Blue River; S19/24, T9N, R4E/R3E
2.5 miles southeast of Milford; Seward County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING determined NRHP non-eligible (score: 18)

CONDITION
fair

OWNER
Seward County

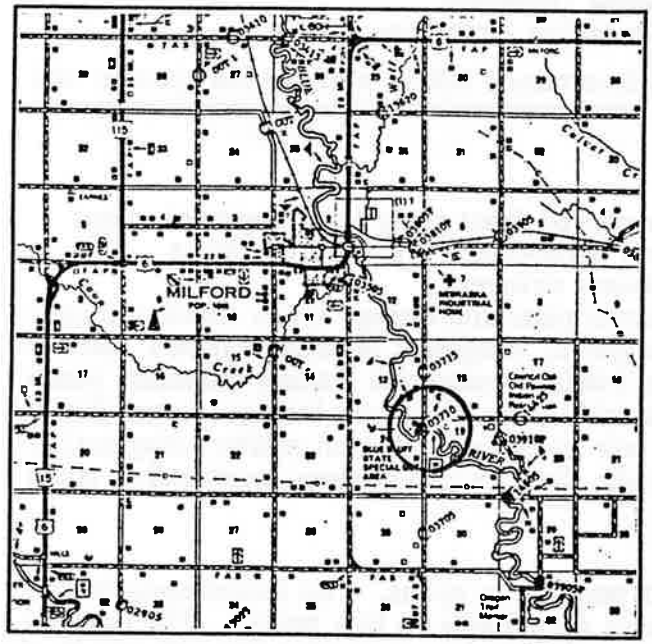
span number:	1	superstructure:	steel, 5-panel, pinned Pratt pony truss with riveted Pratt pony truss approach spans
span length:	83.0'	substructure:	I-beam pile abutments with timber back- and wingwalls; 4 I-beam pile piers
total length:	213.0'	floor/decking:	corrugated steel with gravel surface over I-beam stringers
roadway wdt.:	15.8'	other features:	center span -- upper chord: 2 channels with cover plate and lacing; lower chord: punched eyebars; vertical: 2 pair angles with batten plates; diagonal: punched eyebars; lateral bracing: rods; strut: pair angles; floor beam: I-beam; guardrail: 2 small channels; south and north spans -- upper chord: 2 channels with cover plate and lacing; lower chord: 2 channels with batten plates; vertical: 2 pair angles with batten plates; diagonal: 2 angles with batten plates; lateral bracing: rods; floor beam: I-beams; guardrail: 2 small channels

This bridge, which carries an unpaved road over the Big Blue River, consists of three Pratt pony truss spans. The center span is pin-connected; the north and south spans have riveted connections. County records do not refer specifically to this bridge. The unusual combination of truss styles indicates that the spans were not originally in this configuration and that the approach spans, if not all of the spans, came from other locations. The pin-connected span is probably the earliest of the trio, and may date from the 1910s. Riveted Pratts became more common in the 1920s.

Given the relatively common occurrence of Pratt trusses, the lack of historical information on this particular bridge and crossing, and the likelihood that the bridge has been created from spans of two or more bridges, this bridge does not appear to have any significance.

NAME(S) OF STRUCTURE
Big Blue River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C008003710; Seward County Board of Supervisors' Records, 1898-1920, located in the Seward County Courthouse, Seward, Nebraska; field inspection by Mary McCormick, 6 March 1989.

INVENTORIED BY
Mary McCormick, Renewable Technologies, Inc.

AFFILIATION
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Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Big Blue River Bridge SEWA13
NDOR: C008003905P

DATE(S) OF CONSTRUCTION
ca.1920

LOCATION
county highway over the Big Blue River; Center N1/2 S32, T9N, R4E
5.0 miles southeast of Milford; Seward County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 22)

CONDITION
fair

OWNER
Seward County

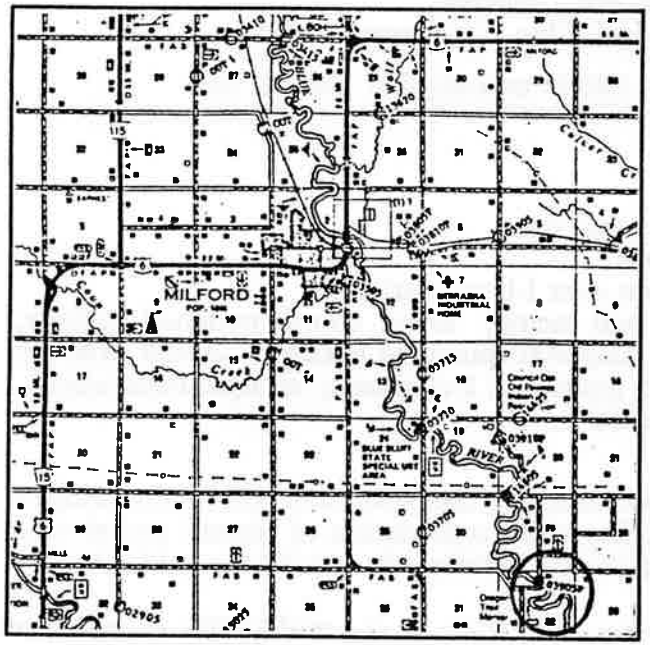
span number:	1	superstructure:	steel, 5-panel, pin- / rigid-connected Pratt pony truss
span length:	100.0'	substructure:	I-beam pile with timber back- and wingwalls
total length:	102.0'	floor/decking:	corrugated steel with gravel wearing surface over I-beam stringers
roadway wdt.:	17.6'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: punched eyebars; vertical: 2 pair angles with batten plates; diagonal: punched eyebars; lateral bracing: rods; strut: steel plate; floor beam: I-beam; guardrail: 2 channels; all rigid-connections, except pin-connection at verticals/upper chord

This bridge carries an unpaved road over the Big Blue River. County records do not refer specifically to this structure. Given the bridge's materials and design, however, it appears to date from about 1920. A standard plan including this combination of pinned and riveted connections may have been available from the state engineer's office as early as 1913, and it was certainly in use by the mid-1920s.

This is a typical pony truss, probably designed from state standard plans and dating from the mid-1910s to the mid-1920s. A number of similar structures survive in Nebraska. Alterations to the superstructure harm the bridge's integrity.

NAME(S) OF STRUCTURE
Big Blue River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C008003905P; Seward County Board of Supervisors' Records, 1898-1920, located in the Seward County Courthouse, Seward, Nebraska; field inspection by Mary McCormick, 6 March 1989.

INVENTORIED BY
Mary McCormick, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Indian Creek Bridge SEWA14
NDOR: C008004205

DATE(S) OF CONSTRUCTION
ca.1905

LOCATION
county highway over Indian Creek; S8/17, T9N, R1E
2.5 miles southwest of Beaver Crossing; Seward County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 19)

CONDITION
fair

OWNER
Seward County

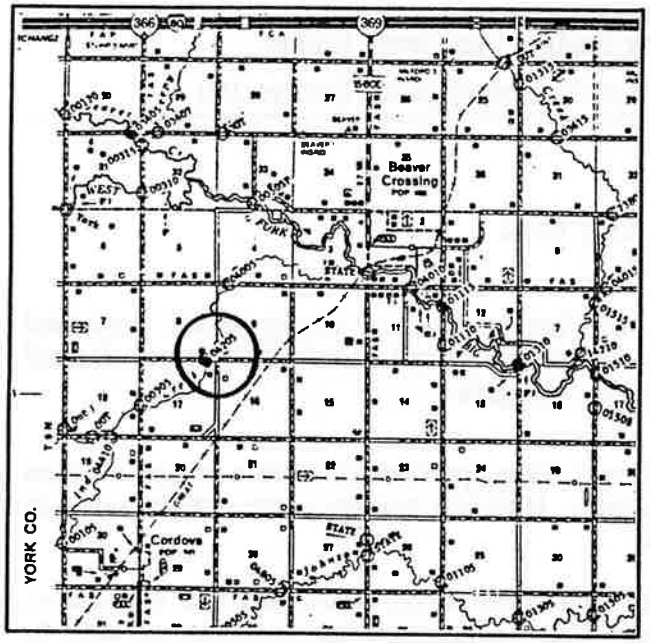
span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt half-hip pony truss
span length:	60.0'	substructure:	I-beam pile with timber back- and wingwalls
total length:	61.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.3'	other features:	upper chord: 2 channels with cover plate and batten plates; lower chord: punched eyebars; vertical: 2 pair angles with batten plates; diagonal: punched eyebars; lateral bracing: rods; floor beam: I-beams; guardrail: 2 angles

This half-hip Pratt pony truss carries an unpaved road over Indian Creek. County records do not refer specifically to this bridge. Given the structure's materials and design, it appears to date from the first decade of the 20th century. Half-hip trusses were not included in state standard plans, and were thus not built after use of state plans was required in 1913.

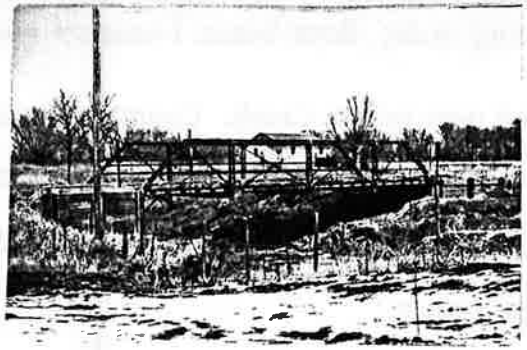
Half-hip trusses were popular because the lack of hip verticals required less material and the structures were, therefore, less expensive. A number of half-hip Pratt pony trusses survive in Nebraska. The lack of information about this bridge and the crossing, as well as alterations to the verticals, diminish the bridge's significance.

NAME(S) OF STRUCTURE
Indian Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C008004205; Seward County Board of Supervisors' Records, 1898-1920, located in the Seward County Courthouse, Seward, Nebraska; field inspection by Mary McCormick, 7 March 1989.

INVENTORIED BY
Mary McCormick, Renewable Technologies, Inc.

AFFILIATION
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Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Culver Creek Bridge
NDOR: C008004310P

SEWA15

DATE(S) OF CONSTRUCTION
ca.1920

LOCATION
county highway over Culver Creek; NE1/4, S3,T9N, R4E
1.2 miles west of Pleasant Dale; Seward County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 17)

CONDITION
good

OWNER
Seward County

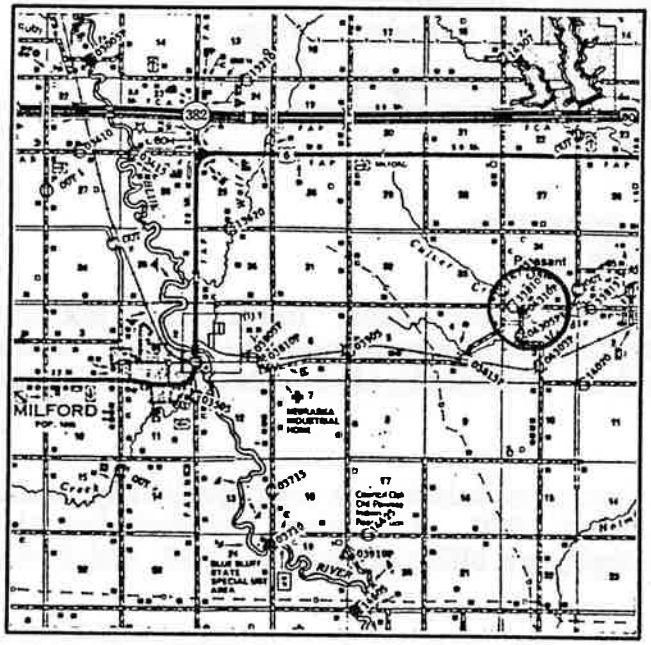
span number:	1	superstructure:	steel, 3-panel, pin- / rigid-connected Pratt pony truss
span length:	40.0'	substructure:	I-beam pile with timber back- and wingwalls
total length:	41.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	16.1'	other features:	upper chord: 2 channels with cover plate and batten plates; lower chord: punched eyebars; vertical: 2 pair angles with batten plates; diagonal: punched eyebars; lateral bracing: rods; floor beam: I-beams; guardrail: 2 channels; all rigid-connections, except pin-connections at vertical/upper chord

This Pratt pony truss carries an unpaved road over Culver Creek west of Pleasant Dale. County records do not refer specifically to this structure. Given the bridge's materials and design, however, it appears to date from about 1920. A standard plan including this combination of pinned and riveted connections may have been available from the state engineer's office as early as 1913, and it was certainly in use by the mid-1920s.

This is a typical pony truss, probably designed from state standard plans and dating from the mid-1910s to the mid-1920s. A number of similar structures survive in Nebraska.

NAME(S) OF STRUCTURE
Culver Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C008004310P; Seward County Board of Supervisors' Records, 1898-1920, located in the Seward County Courthouse, Seward, Nebraska; field inspection by Mary McCormick, 7 March 1989.

INVENTORIED BY
Mary McCormick, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Plum Creek Bridge
NDOR: C008010620

SEWA16

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
county highway over Plum Creek; S10/15, T12N, R3E
1.0 mile northwest of Bee; Seward County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 17)

CONDITION
fair

OWNER
Seward County

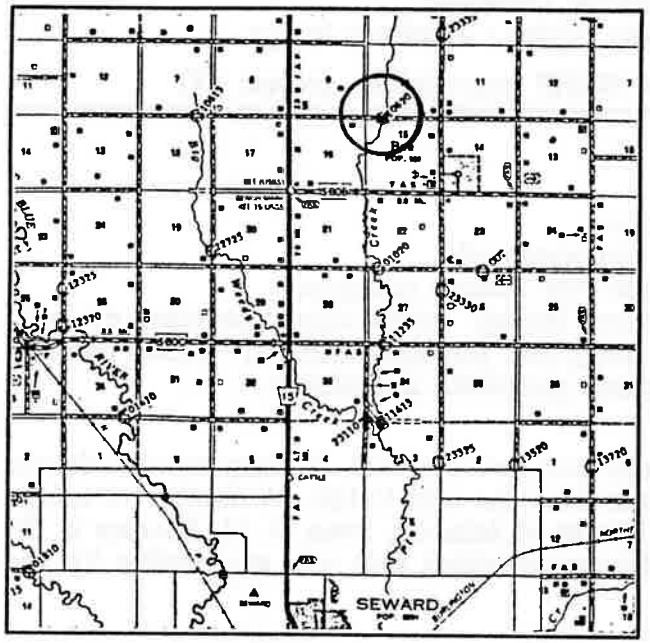
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt pony truss
span length:	50.0'	substructure:	I-beam (built-up) piles with timber back- and wingwalls
total length:	51.0'	floor/decking:	corrugated steel with gravel wearing surface over I-beam stringers
roadway wdt.:	15.8'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: punched eyebars; vertical: 2 pair angles with batten plates; diagonal: punched eyebars; lateral bracing: rods; strut: pair angles; floor beam: I-beam; guardrail: 2 channels

This pinned Pratt pony truss carries an east-west unpaved road over Plum Creek about a mile northwest of Bee. County records do not refer specifically to this bridge. Given the structure's materials and design, it appears to date from the mid-1910s. A number of bridge builders erected bridges in Seward County during this period, including S.G. Hunter Iron Works of Atlantic, Iowa, J. M. Sheeley of Ft. Collins, Colorado, and the Standard Bridge Company of Omaha, so it is not possible to determine which firm was responsible for the bridge's construction.

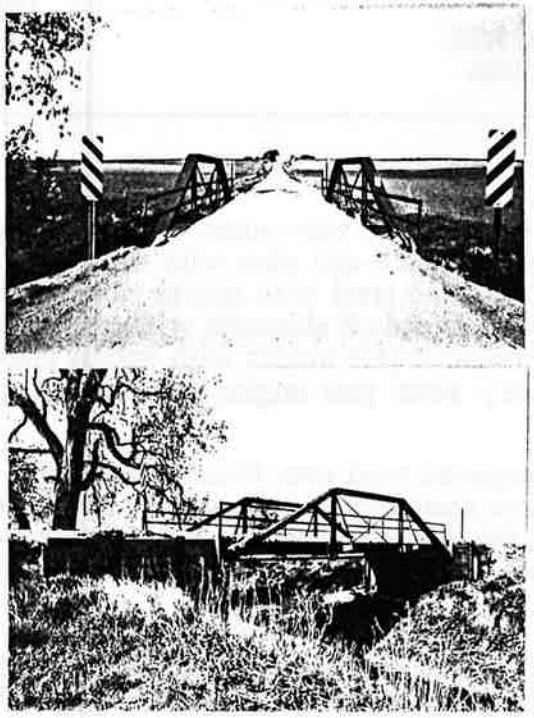
Pratt pony trusses were the most popular style of truss in Nebraska in the first decades of the 20th century. This bridge appears to be a typical example of this style, and its design was probably based on standard plans provided by the state engineer's office.

NAME(S) OF STRUCTURE
Plum Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C008010620; Seward County Board of Supervisors' Records, 1898-1920, located in the Seward County Courthouse, Seward, Nebraska; field inspection by Mary McCormick, 2 March 1989.

INVENTORIED BY
Mary McCormick, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Plum Creek Bridge
NDOR: C008011415

SEWA17

DATE(S) OF CONSTRUCTION
ca.1905

LOCATION
county highway over Plum Creek; S3/34, T11/12N, R3E
3.0 miles southwest of Bee; Seward County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 19)

CONDITION
fair

OWNER
Seward County

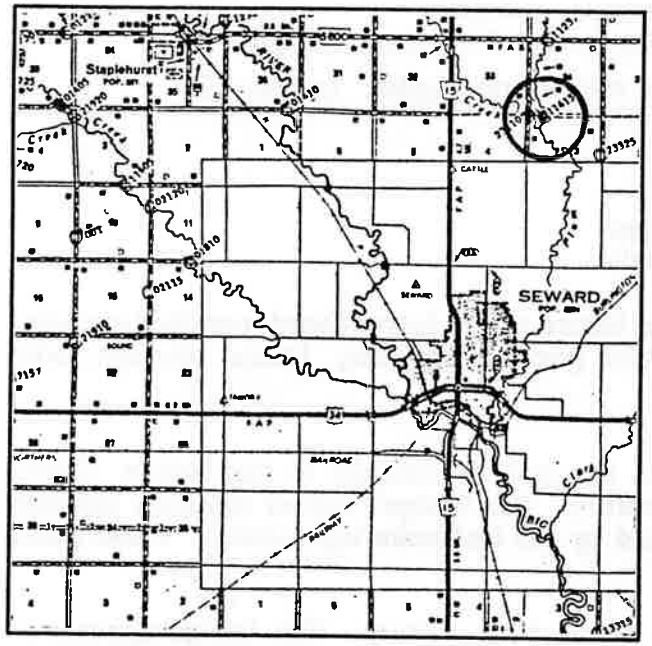
span number:	1	superstructure:	steel, 5-panel, pin-connected Pratt pony truss
span length:	70.0'	substructure:	I-beam piles with timber back- and wingwalls
total length:	71.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	15.6'	other features:	upper chord: 2 channels with cover plate and batten plate; lower chord: punched eyebars; vertical: 2 pair angles with lacing; diagonal: punched eyebars; lateral bracing: rods; floor beam: I-beam; guardrail: 2 angles

This Pratt pony truss carries an unpaved county road over Plum Creek. County records do not refer specifically to this bridge. Given the structure's materials and design, it appears to date from the first decade of the 20th century. The bridge's timber stringers indicate that it was certainly built prior to 1913, when the use of state standard plans was mandated by the Nebraska legislature. These plans always specified I-beam stringers for truss designs.

The Pratt pony truss was the most popular bridge design in Nebraska in the first decades of the 20th century. This bridge appears to be typical of the type of Pratt ponies built before state standard plans were imposed in 1913. Alteration of the structure's verticals harms its integrity.

NAME(S) OF STRUCTURE
Plum Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C008011415; Seward County Board of Supervisors' Records, 1898-1920, located in the Seward County Courthouse, Seward, Nebraska; field inspection by Mary McCormick, 2 March 1989.

INVENTORIED BY
Mary McCormick, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Big Blue River Bridge
NDOR: C008011610

SEWA18

DATE(S) OF CONSTRUCTION
ca.1900

LOCATION
county highway over the Big Blue River; S6/7, T11N, R3E
2.2 miles northwest of Seward; Seward County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 21)

CONDITION
fair

OWNER
Seward County

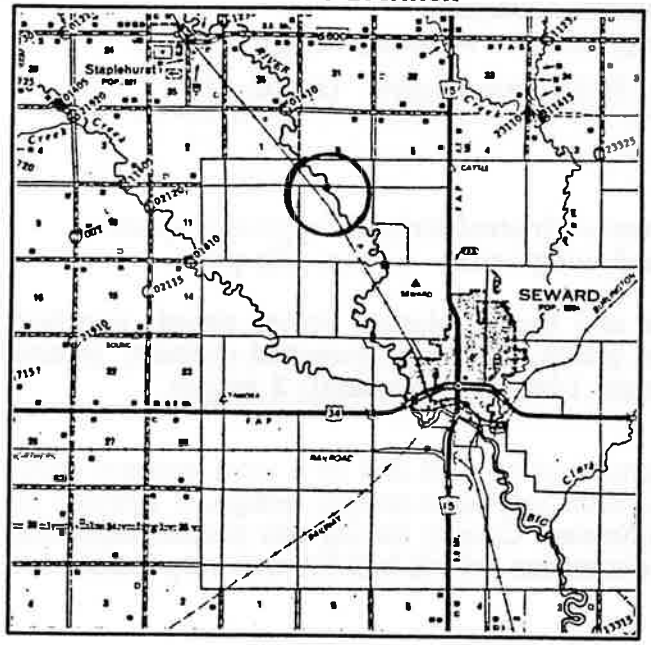
span number:	1	superstructure:	steel, 5-panel, pin-connected Pratt pony truss with steel stringer approach spans
span length:	80.0'	substructure:	timber pile abutments with timber back- and wing walls; I-beam pile piers
total length:	108.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.7'	other features:	upper chord: 2 channels with cover plate and batten plates; lower chord: punched eyebars; vertical: 2 pair angles with batten plates; diagonal: punched eyebars; lateral bracing: rods; strut: pair angles; floor beam: I-beams; guardrail: 2 angles

This pinned Pratt pony truss, which carries an unpaved road over the Big Blue River, is approached at each end by a steel stringer span. County records do not refer specifically to this bridge. Given the structure's materials and relatively light-weight design, it appears to date from the first decade of the 20th century. A number of bridge builders were active in Seward County during this period, including J.M. Sheeley, Frank Stocker, and the Standard Bridge Company, so it is not possible do determine which builder was responsible for erecting this structure.

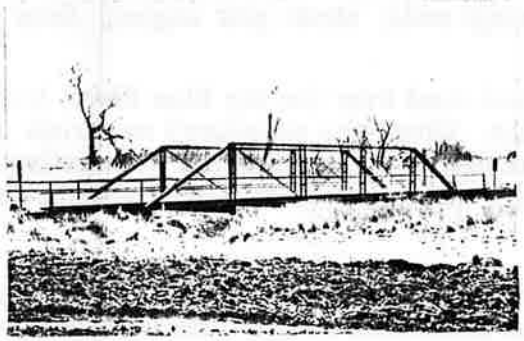
The Pratt pony was the most common type of truss erected in Nebraska in the first decades of the 20th century. Lack of historical information about this structure or the crossing, and alterations to the truss's verticals, diminish the bridge's significance.

NAME(S) OF STRUCTURE
Big Blue River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C008011610; Seward County Board of Supervisors' Records, 1898-1920, located in the Seward County Courthouse, Seward, Nebraska; field inspection by Mary McCormick, 6 March 1989.

INVENTORIED BY
Mary McCormick, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Big Blue River Bridge
NDOR: C008012125

SEWA19

DATE(S) OF CONSTRUCTION
ca.1900

LOCATION
county highway over the Big Blue River; S22/23, T12N, R2E
2.0 miles north of Staplehurst; Seward County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 21)

CONDITION
fair

OWNER
Seward County

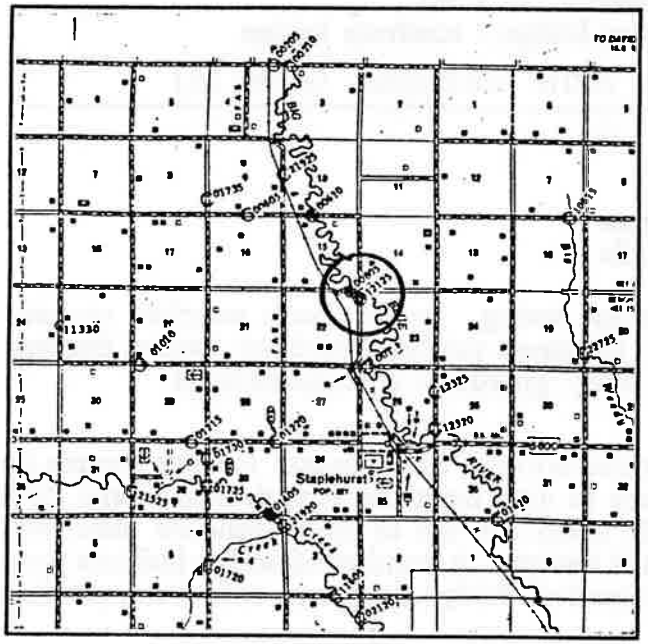
span number:	1	superstructure:	steel, 5-panel, pin-connected Pratt pony truss
span length:	80.0'	substructure:	I-beam pile with timber back- and wingwalls
total length:	81.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.3'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: punched eyebars; vertical: 2 pair angles with batten plates; diagonal: punched eyebars; lateral bracing: rods; strut: pair angles; lateral bracing: rods; guardrail: corrugated steel

This pin-connected Pratt pony truss carries an unpaved road over the Big Blue River two miles north of Staplehurst. County records do not refer specifically to this bridge. Given the structure's materials and design, it appears to date from the first decade of the 20th century. The bridge's timber stringers indicate that it was certainly built prior to 1913, when the use of state standard plans was mandated by the Nebraska legislature. These plans always specified I-beam stringers for truss designs. A number of bridge builders were active in Seward County during this period, including J.M. Sheeley, Frank Stocker, and the Standard Bridge Company, so it is not possible do determine which builder was responsible for erecting this structure.

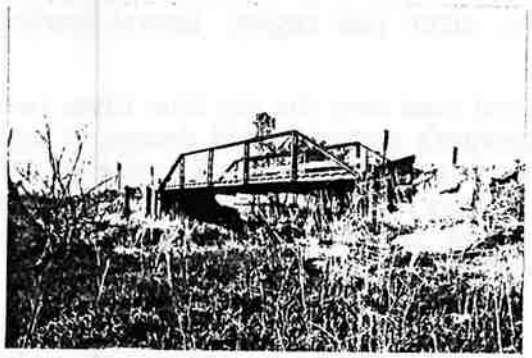
The Pratt pony truss was the most popular bridge design in Nebraska in the first decades of the 20th century. This bridge appears to be typical of the type of Pratt ponies built before state standard plans were imposed in 1913. Alterations to the structure harm its integrity.

NAME(S) OF STRUCTURE
Big Blue River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C008012125; Seward County Board of Supervisors' Records, 1898-1920, located in the Seward County Courthouse, Seward, Nebraska; field inspection by Mary McCormick, 6 March 1989.

INVENTORIED BY
Mary McCormick, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Big Blue River Bridge
NDOR: C008014605

SEWA20

DATE(S) OF CONSTRUCTION
ca.1925

LOCATION
county highway over the Big Blue River; S20/29, T9N, R4E
2.5 miles southeast of Milford; Seward County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 22)

CONDITION
good

OWNER
Seward County

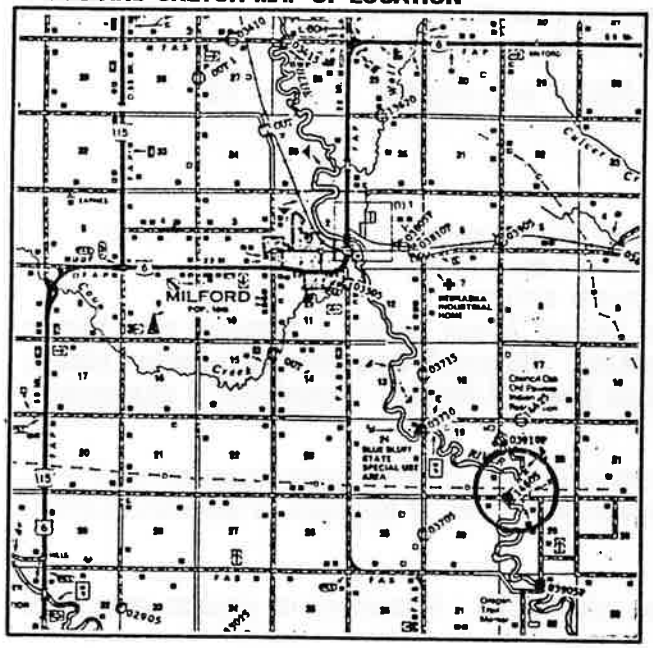
span number:	1	superstructure:	steel, 5-panel, rigid-connected Pratt pony truss with steel stringer approach spans
span length:	100.0'	substructure:	I-beam pile with timber back- and wingwalls; I-beam pile piers
total length:	150.0'	floor/decking:	corrugated steel with gravel surface over I-beam stringers
roadway wdt.:	17.7'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 channels with batten plates; vertical: 2 pair angles with batten plates; diagonal: 2 angles with batten plates; lateral bracing: rods; strut: steel plate; floor beam: I-beams; guardrail: 2 channels

This riveted Pratt pony truss, which carries a county road over the Big Blue River, is approached by a steel stringer span at each end. County records do not refer specifically to this structure. Given the bridge's materials and design, however, it appears to date from about 1925.

This is a typical pony truss, probably designed from state standard plans and dating from the mid-1920s. A number of similar structures survive in Nebraska, including C008001310 and C008002010 in Seward County.

NAME(S) OF STRUCTURE
Big Blue River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C008014605; Seward County Board of Supervisors' Records, 1898-1920, located in the Seward County Courthouse, Seward, Nebraska; field inspection by Mary McCormick, 6 March 1989.

INVENTORIED BY
Mary McCormick, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Big Weedy Creek Bridge
NDOR: C008023110

SEWA21

DATE(S) OF CONSTRUCTION
ca.1905

LOCATION
county highway over Big Weedy Creek; S3/4, T11N, R3E
3.2 miles southwest of Bee; Seward County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 16)

CONDITION
fair

OWNER
Seward County

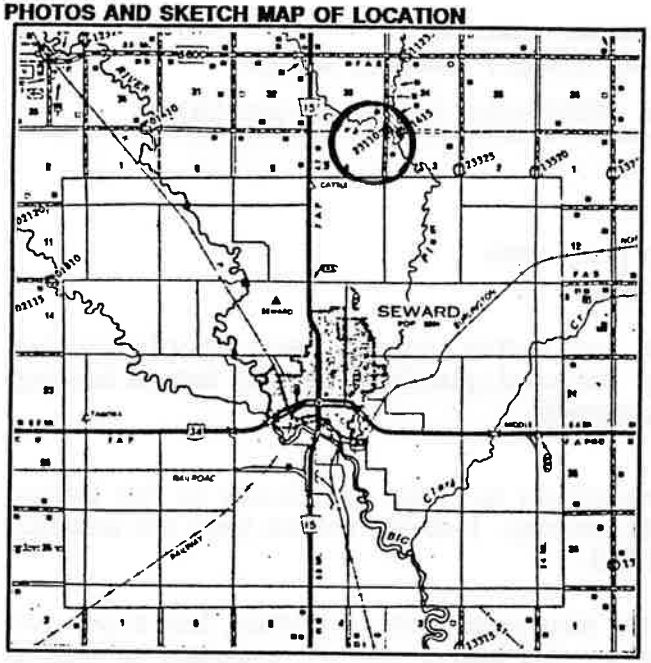
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt half-hip pony truss
span length:	50.0'	substructure:	I-beam pile with timber back- and wingwalls
total length:	51.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.6'	other features:	upper chord: 2 channels with cover plate and batten plates; lower chord: punched eyebars; vertical: 2 pair angles with lacing; diagonal: punched eyebars; lateral bracing: rods; floor beam: I-beams; guardrail: 2 channels

This three-panel half-hip truss carries an unpaved road over Big Weedy Creek. County records do not refer specifically to this bridge. Given the structure's materials and design, it appears to date from the first decade of the 20th century. Half-hip trusses were not included in state standard plans, and were thus not built after use of state plans was required in 1913.

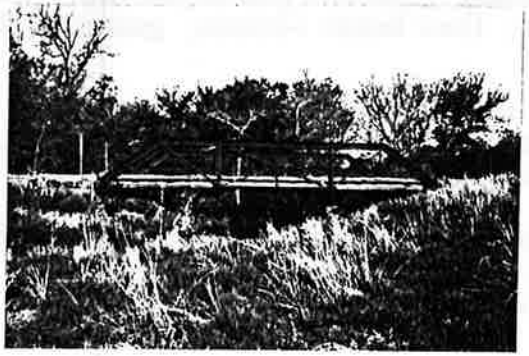
Half-hip trusses were popular because the lack of hip verticals required less material and the structures were, therefore, less expensive. A number of Pratt half-hip pony trusses survive in Nebraska. The lack of information about this bridge and the crossing, as well as alterations to the upper chord, diminish the bridge's significance.

NAME(S) OF STRUCTURE
Big Weedy Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C008023110; Seward County Board of Supervisors' Records, 1898-1920, located in the Seward County Courthouse, Seward, Nebraska; field inspection by Mary McCormick, 2 March 1989.

INVENTORIED BY
Mary McCormick, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Middle Creek Bridge
NDOR: C008034515

SEWA22

DATE(S) OF CONSTRUCTION
ca.1920

LOCATION
county highway over Middle Creek; S34/35, T11N, R4E
4.5 miles southeast of Garland; Seward County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 17)

CONDITION
good

OWNER
Seward County

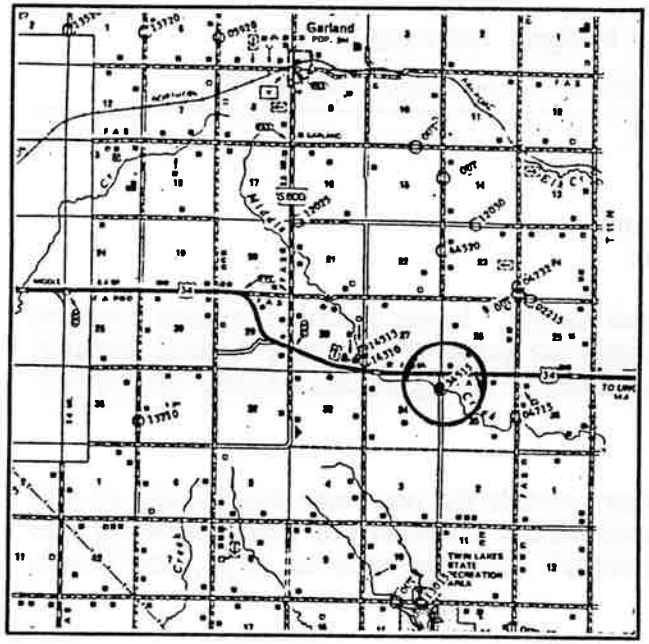
span number:	1	superstructure:	steel, 3-panel, pin- / rigid-connected Pratt pony truss
span length:	35.0'	substructure:	I-beam pile with timber back- and wingwalls
total length:	36.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.8'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: punched eyebars; vertical: 2 pair angles with batten plates; diagonal: punched eyebars; lateral bracing: rods; floor beam: I-beams; guardrail: 2 channels; all rigid-connections, except pin-connection at verticals/upper chord

This small-scale Pratt pony truss carries an unpaved county road over Middle Creek. County records do not refer specifically to this structure. Given the bridge's materials and design, however, it appears to date from about 1920. A standard plan including this combination of pinned and riveted connections may have been available from the state engineer's office as early as 1913, and it was certainly in use by the mid-1920s.

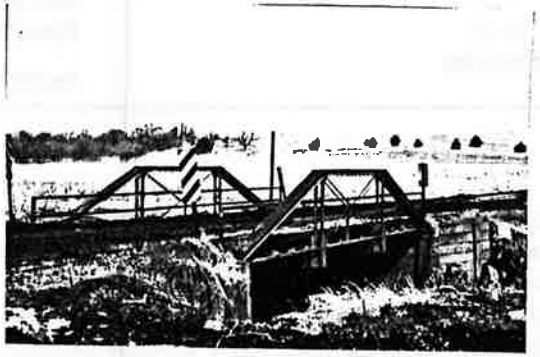
This is a typical pony truss, probably designed from state standard plans and dating from the mid-1910s to the mid-1920s. A number of similar structures survive in Nebraska.

NAME(S) OF STRUCTURE
Middle Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. C008034515; Seward County Board of Supervisors' Records, 1898-1920, located in the Seward County Courthouse, Seward, Nebraska; field inspection by Mary McCormick, 8 March 1989.

INVENTORIED BY	AFFILIATION	DATE
Mary McCormick, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Big Blue River Bridge
NDOR: S00629351

SEWA23

DATE(S) OF CONSTRUCTION
1933

LOCATION
U.S. Highway 6 over the Big Blue River; SE1/4, S2, T9N, R3E
Northeast corner of Milford; Seward County, Nebraska

USE (ORIGINAL / CURRENT)
highway bridge / highway bridge

RATING NHRP non-eligible (score: 28)

CONDITION
good

OWNER
State of Nebraska

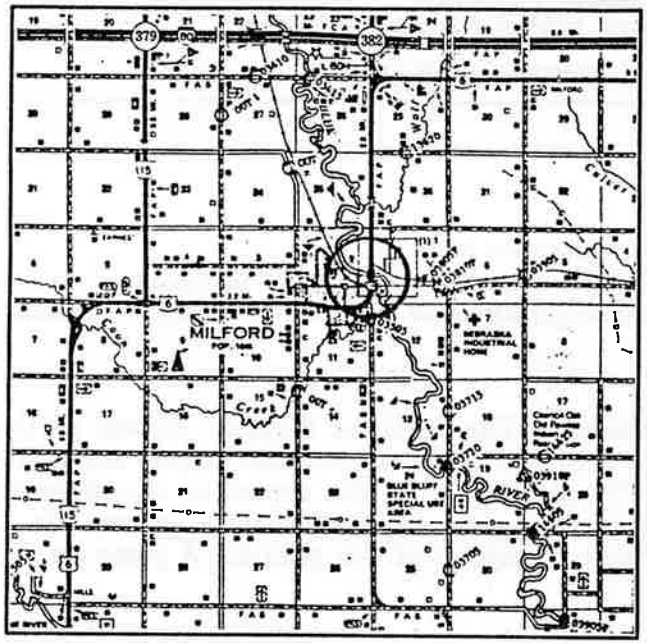
span number:	5	superstructure:	steel cantilevered stringer
span length:	90.0'	substructure:	concrete abutments with flared wingwalls; concrete piers
total length:	271.0'	floor/decking:	concrete over I-beam girders (5 per span) with I-beam and concrete bridging
roadway wdt.:	23.0'	other features:	guardrail: angle rail and post bolted to 2-foot-high concrete wall; bridge plaque: **Capacity 20 Tons, 1933**

This bridge carries U.S. Highway 6 over the Big Blue River on the northeast edge of Milford. The 1931-32 **Biennial Report** of the Nebraska Department of Public Works contains a profile drawing of the "Blue River Bridge near Milford" and includes details about the borings made in conjunction with its design. The report parenthetically refers to it as "Project 134-A." The report of the district's highway engineer in the department's 1933-34 **Biennial Report** lists the "pavement, bridges, and grade separation on Highway No. 6 from... two miles of north of Milford, to Dorchester" among the region's principal construction projects of the period. A plate on the bridge reads "Capacity 20 Tons, 1933," confirming the construction date.

The Department of Public Works' 1931-32 **Biennial Report** reports that "deck steel girders with concrete substructures" are "now considered to represent one of the most permanent and adequate types of structure yet devised for this region." It continues that "while various other groups who a cheaper first cost it is believe that, owing to the long life and low maintenance cost" of this type of bridge, "they will prove to have a lower annual cost over a long term of years." The Milford Bridge is a typical example of this style.

NAME(S) OF STRUCTURE
Big Blue River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure No. S00629351; Nebraska Department of Public Works, **Biennial Report, 1931-32**, pp. 73, 95; Nebraska Department of Roads and Irrigation, **Biennial Report, 1933-34**, pp. 29-30; field inspection by Mary McCormick, 6 March 1989.

INVENTORIED BY
Mary McCormick, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Colclesser Bridge [Rath Bridge; Niobrara River Bridge] SHER01
NDOR: C008124905P

DATE(S) OF CONSTRUCTION
1888; moved 1933-34

LOCATION
county road over the Niobrara River; S28, T30N, R44W
11.0 miles south of Rushville; Sheridan County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 52)

CONDITION
fair

OWNER
Sheridan County

span number: 1
span length: 166.0'
total length: 167.0'
roadway wdt.: 15.8'

superstructure: wrought iron, 8-panel, pin-connected Baltimore through truss
substructure: steel pile bent abutments with timber wingwalls
floor/decking: timber deck over timber stringers
other features: upper chord: 2 built-up channels with cover plate and lacing; lower chord: 2 punched rectangular eyebars; vertical: 4 angles with lacing; 2 punched rectangular eyebars; diagonal: 2 punched rectangular eyebars; 2 round eyebars with turnbuckles; lateral bracing: round bar with threaded ends; strut: 4 angles with lacing; floor beam: tapered, "fishtail" plate girder, field bolted to vertical above lower chord; guardrail: 2 angles; endpost stiffener: 2 channels with lacing; portal brace: lattice

When a massive ice jam carried away the existing bridge over the Loup River south of Columbus NE in November 1886, the Platte County Supervisors immediately began considering a replacement. They called a special county-wide election to authorize a bond issue for the new structure, and, after the referendum passed in October 1887, the commissioners solicited competitive bids from bridge companies. Proposals were received in December from eight bridge firms for both 4- and 5-span configurations. The county then awarded a construction contract for $38,000 to George E. King of Des Moines, western agent for the King Iron Bridge Company of Cleveland OH. Consisting of four 248-foot through trusses, the Columbus Loup River Bridge was extensive, and King worked until October 1888 to complete it. The bridge carried heavy traffic - first as a county road, then the Lincoln Highway and finally on U.S. Highway 30 - until its replacement with another truss (**PLAT04**), completed early in 1933. That August heavy flooding washed out virtually all of the bridges over the Niobrara River in Sheridan County. The Sheridan County Commissioners purchased two of the spans of the Columbus Bridge and erected them to replace damaged structures. Four of the panels were removed from one of the trusses, shortening its span length to 166 feet, and it was erected at the Colclesser crossing, 11 miles south of Rushville, for $6211 by the General Construction Company. Now called the Rath Bridge, it has since carried light traffic without further alteration. (See **SHER02** for additional history.)

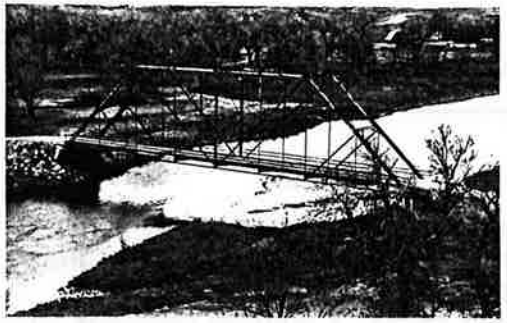
In its present location in the Sand Hills region, far removed from the Loup River of eastern Nebraska, the Colclesser Bridge has lost the considerable historical significance accrued by the original Columbus Loup River Bridge. But this structure has retained a high degree of technological significance. Although numerous wrought iron bridges were erected in eastern Nebraska in the 1880s, only a handful remains today. None of the others are on the scale of the Colclesser or Loosveldt trusses. Built in 1888 by a nationally prominent bridge erector, both structures are important to the history of bridge building in Nebraska for their representation of the state's earliest iron truss construction.

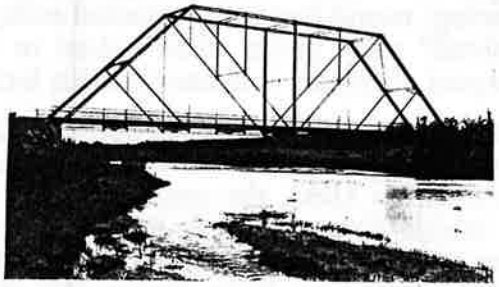
NAME(S) OF STRUCTURE

Colclesser Bridge [Rath Bridge; Niobrara River Bridge]

PHOTOS AND SKETCH MAP OF LOCATION

LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C008124905P; Platte County Supervisors' Record, located at Platte County Courthouse, Columbus, Nebraska, Book 2: 2 December 1886 (pages 52-53), 14 December 1886 (pages 56-57), 21 January 1887 (page 96), 16 September 1887 (pages 176-78), 12 December 1887 (pages 193-95), 13 December 1887 (pages 195-96, 208), 7 March 1888 (page 259), 13 June 1888 (page 270), 15 June 1888 (page 278), 2 October 1888 (page 313), 3 October 1888 (page 317); Sheridan County Commissioners' Record, located at the Sheridan County Courthouse, Rushville NE, Book E: 31 August 1933 (page 560), 16 October 1933 (page 571), 20 November 1933 (pages 578-79), 7 December 1933 (page 579), 16 April 1934 (page 607), 3 January 1935 (page 658); Myron Schievelbein, Sheridan County Engineer, oral interview with Clayton Fraser, 23 April 1990; field inspection by Clayton Fraser, 23 April 1990.

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Loosveldt Bridge [Budd Bridge; Niobrara River Bridge] SHER02
NDOR: none

DATE(S) OF CONSTRUCTION
1888; moved 1933-34

LOCATION
private ranch road over Niobrara River; S17, T30N, R43W
9.1 miles southeast of Rushville; Sheridan County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / private bridge

RATING potentially NRHP eligible (score: 59)

CONDITION
fair

OWNER
Kurt Budd, Rushville NE

span number: 1
span length: 250.0'
total length: 260.0'
roadway wdt.: 15.8'

superstructure: wrought iron, 12-panel, pin-connected Baltimore through truss
substructure: steel pile bent abutments with timber wingwalls
floor/decking: timber deck over timber stringers
other features: upper chord: 2 built-up channels with cover plate and lacing; lower chord: 2 punched rectangular eyebars; vertical: 4 angles with lacing; 2 punched rectangular eyebars; diagonal: 2 punched rectangular eyebars; 2 round eyebars with turnbuckles; lateral bracing: round bar with threaded ends; strut: 4 angles with lacing; floor beam: tapered, "fishtail" plate girder, field bolted to vertical above lower chord; guardrail: 2 angles; endpost stiffener: 2 channels with lacing; portal bracing: lattice

On August 25, 1933, heavy rains flooded the Niobrara River, washing out all bridges over the river in Sheridan County. The Sheridan County Commissioners declared an emergency and quickly acted to replace the bridges. In November the county solicited bids for reconstruction of the Colclesser and Loosveldt Bridges south of Rushville and applied for Federal Emergency Relief money to defray a portion of the cost for replacement bridges. (The Federal Emergency Administration of the PWA awarded a $5,000 grant in April 1934.) The only proposal received was from the General Construction Company, which submitted bids for both new and used bridges. The county contracted with General Construction to provide a used span and erect it at the Loosveldt [Looseveldt; Loosefeldt] crossing for $7887.66. The 248-foot span was to come from the Columbus Loup River Bridge, built in 1888 by the King Iron Bridge Company and replaced earlier in 1933 by another structure. General Construction moved the truss to the Looseveldt site and re-assembled it on steel pile bent piers in 1934. The county maintained the Loosveldt Bridge as a county road until 1984, at which time it was sold to the adjacent landowner. Now called the Budd Bridge, it carries traffic at the headquarters for the Budd family ranch. (See SHER01 for additional history.)

In its present location in the Sand Hills region, far removed from the Loup River of eastern Nebraska, the Loosveldt Bridge has lost the considerable historical significance accrued by the original Columbus Loup River Bridge. But this structure has retained a high degree of technological significance, even in its new location. Although numerous wrought iron bridges were erected in eastern Nebraska in the 1880s, only a handful remains today. None are on the scale of the Colclesser or Loosveldt trusses. Built in 1888 by a nationally prominent bridge erector, both structures are important to the history of bridge building in Nebraska for their representation of the state's earliest iron truss construction.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

NAME(S) OF STRUCTURE

Loosveldt Bridge [Budd Bridge; Niobrara River Bridge]

PHOTOS AND SKETCH MAP OF LOCATION

LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES

Sheridan County, Structure Inventory and Appraisal: Structure Number C008104305; Platte County Supervisors' Record, located at Platte County Courthouse, Columbus, Nebraska, Book 2: 2 December 1886 (pages 52-53), 14 December 1886 (pages 56-57), 21 January 1887 (page 96), 16 September 1887 (pages 176-78), 12 December 1887 (pages 193-95), 13 December 1887 (pages 195-96, 208), 7 March 1888 (page 259), 13 June 1888 (page 270), 15 June 1888 (page 278), 2 October 1888 (page 313), 3 October 1888 (page 317); Sheridan County Commissioners' Record, located at the Sheridan County Courthouse, Rushville NE, Book E: 31 August 1933 (page 560), 16 October 1933 (page 571), 20 November 1933 (pages 578-79), 7 December 1933 (page 579), 16 April 1934 (page 607), 3 January 1935 (page 658); Myron Schievelbein, Sheridan County Engineer, oral interview with Clayton Fraser, 23 April 1990; field inspection by Clayton Fraser, 23 April 1990.

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C008201305

SHRM01

DATE(S) OF CONSTRUCTION
1914

LOCATION
county road over Mud Creek tributary; S19, T13N, R15W
1.1 mile southwest of Hazard; Sherman County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 33)

CONDITION
fair

OWNER
Sherman County

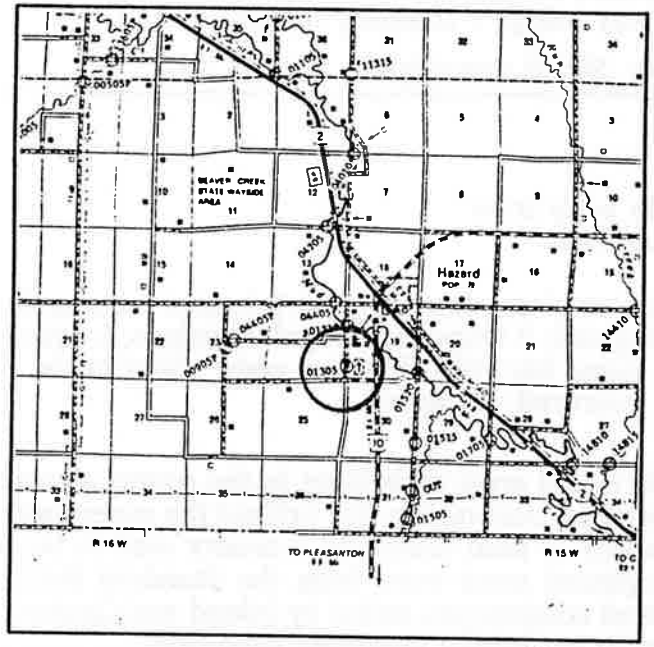
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt half-hip pony truss
span length:	40.0'	substructure:	steel pile bent abutments with timber wingwalls
total length:	40.0'	floor/decking:	timber decking over timber stringers
roadway wdt.:	15.6'	other features:	upper chord: 2 channels with batten and cover plate; lower chord: 2 looped rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 looped rectangular eyebars, 1 square eyebar with turnbuckle; lateral bracing: round bar with threaded ends; floor beam: I-beam, U-bolted to lower pin at vertical; guardrail: 2 angles

The Sherman County Board of Supervisors resolved in May 1914 that the township boards would erect all bridges in the county shorter than 20 feet in length, and the county itself would assume responsibility for the longer structures. Among the five bridges the supervisors' bridge committee recommended for construction that month was a span over a small tributary of Mud Creek, on a county road in Scott Township. For this crossing south of Hazard, the bridge committee ordered a 40-foot pinned pony truss from the Standard Bridge Company in Omaha, which then held the annual bridge contract with the county. Using steel components rolled by Inland and Cambria, Standard Bridge completed the short-span structure that year. It has carried traffic since, in essentially unaltered condition.

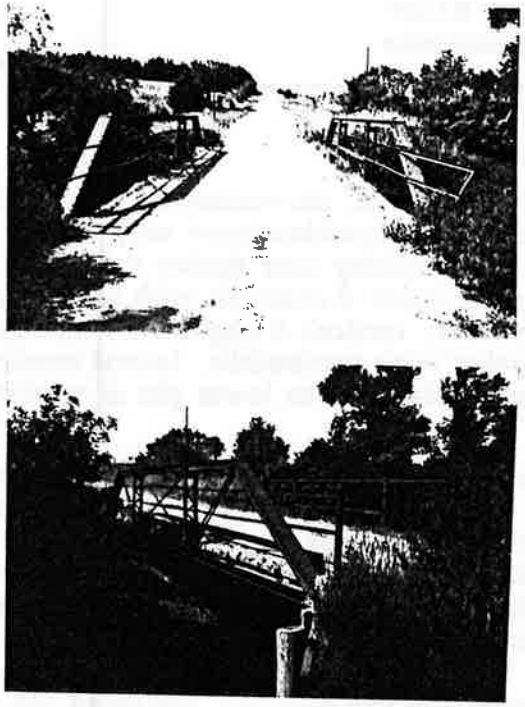
The Standard Bridge Company, like many Midwestern bridge erectors, marketed the Pratt half-hip pony truss extensively in the early 1900s. Lacking a vertical at the hip connection, it was slightly lighter - and thus cheaper to fabricate - than the standard Pratt truss. The state bureau of roads did not adopt the half-hip design as a state standard, however, and as the counties began using the state standards increasingly in the mid-1910s, erection of half-hip ponies decreased quickly. Nevertheless, numerous half-hip ponies remain in use on Nebraska's secondary roads today. Although it retains a high degree of physical integrity, this bridge is an undistinguished example of a common vehicular truss configuration.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C008201305; Proceedings of the Sherman County Board of Supervisors, Book 6: 20 May 1914 (p.188), 15 September 1914 (p.218), located at Sherman County Courthouse, Loup City, Nebraska; field inspection by Clayton Fraser, 7 July 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Mud Creek Bridge
NDOR: C008201520

SHRM02

DATE(S) OF CONSTRUCTION
ca.1925

LOCATION
county road over Mud Creek; S19/20, T13N, R15W
1.2 miles southeast of Hazard; Sherman County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 37)

CONDITION
good

OWNER
Sherman County

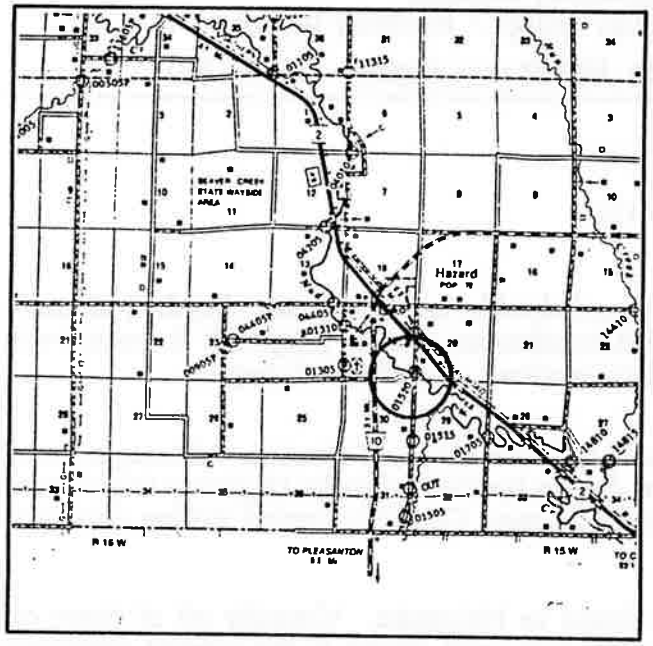
span number:	1	superstructure:	steel, 5-panel, rigid-connected Pratt pony truss
span length:	100.0'	substructure:	concrete abutments and wingwalls
total length:	102.0'	floor/decking:	concrete decking over I-beam stringers
roadway wdt.:	18.7'	other features:	upper chord: 2 channels with cover plates and double lacing; lower chord: 2 channels with batten plates; vertical: 4 angles with continuous plate; diagonal: 2 angles with batten plates; floor beam: I-beam bolted to vertical; guardrail: 2 angles

This rigid-connected truss carries an unpaved county road over Mud Creek a little more than a mile southeast of Hazard. Although county records do not refer specifically to this structure, it appears to be fabricated from a standard design by the Nebraska Highway Department and erected ca.1925, a period during which the Standard Bridge Company of Omaha held Sherman County's annual bridge contracts. Consisting of a single long-span Pratt pony truss, the bridge appears unaltered.

The Mud Creek Bridge is one of dozens of nearly identical 100-foot riveted Pratt ponies found in Nebraska. Virtually all of these can be attributed to the standardized designs of the state highway department. Although the 100-foot span length is the longest developed by the state for this truss configuration (through trusses were used for longer spans), this fact is only marginally noteworthy. The Mud Creek Bridge is Sherman County's sole remaining example of this relatively common structural type, but is otherwise undistinguished among Nebraska's more recent trusses.

NAME(S) OF STRUCTURE
Mud Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C008201520; field inspection by Clayton Fraser, 7 July 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Clear Creek Bridge
NDOR: C008202805

SHRM03

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
county road over Clear Creek; S4/9, T14N, R16W
3.5 miles north of Litchfield; Sherman County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 34)

CONDITION
fair

OWNER
Sherman County

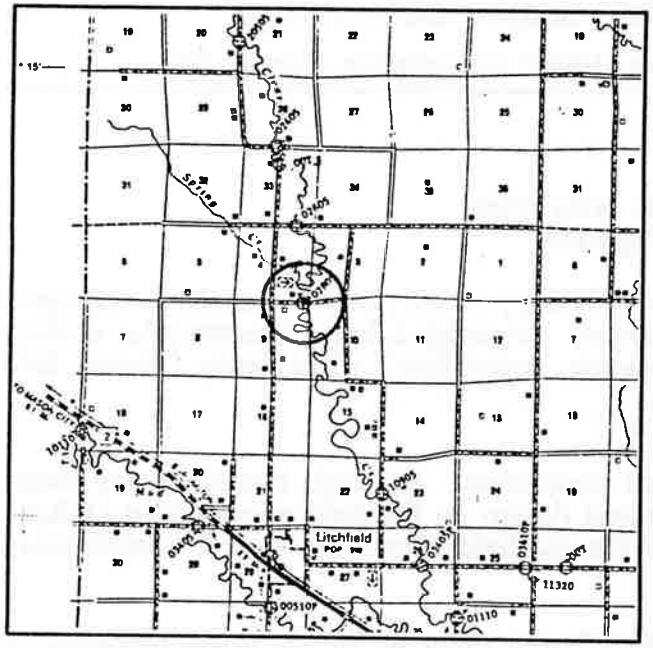
span number:	1	superstructure:	steel, 4-panel, pin- / rigid-connected Pratt pony truss
span length:	80.0'	substructure:	steel pile bent abutments with timber wingwalls
total length:	81.0'	floor/decking:	timber decking over timber stringers
roadway wdt.:	15.7'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 punched rectangular eyebars; vertical: 4 angles with batten plates; diagonal: 2 looped rectangular eyebars, 1 round bar with turnbuckle; lateral bracing: round bar; floor beam: I-beam, field-bolted to vertical; guardrail: 2 channels

Located north of Litchfield, the Clear Creek Bridge consists of a single pin-connected Pratt pony truss. Although contemporary county records do not refer specifically to this structure, it appears to be fabricated from a standard design by the Nebraska Bureau of Roads and Bridges and erected ca.1915, a period during which the Standard Bridge Company of Omaha held Sherman County's annual bridge contracts.

The state bureau of roads developed standard plans for bridges as early as 1905 and distributed them to the counties, updating the designs periodically to reflect technological improvements. One of the most widely used standard in the 1910s was the 80-foot pony truss, which featured pinned connections with bolted gusset plates at the upper chords. The Clear Creek Bridge is one of many such standard designs still carrying traffic on Nebraska's secondary roads. Built ca.1915 over a minor watercourse, it is one of the less distinguished examples of this common truss configuration.

NAME(S) OF STRUCTURE
Clear Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C008202805; field inspection by Clayton Fraser, 7 July 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Rock Creek Bridge
NDOR: none

SHRM04

DATE(S) OF CONSTRUCTION
1912

LOCATION
abandoned county road over Rock Creek; S5, T13N, R13W
0.9 mile northwest of Rockville; Sherman County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / abandoned

RATING NRHP non-eligible (score: 33)

CONDITION
fair/poor

OWNER
Richard G. Hanisch, St. Paul, Nebraska

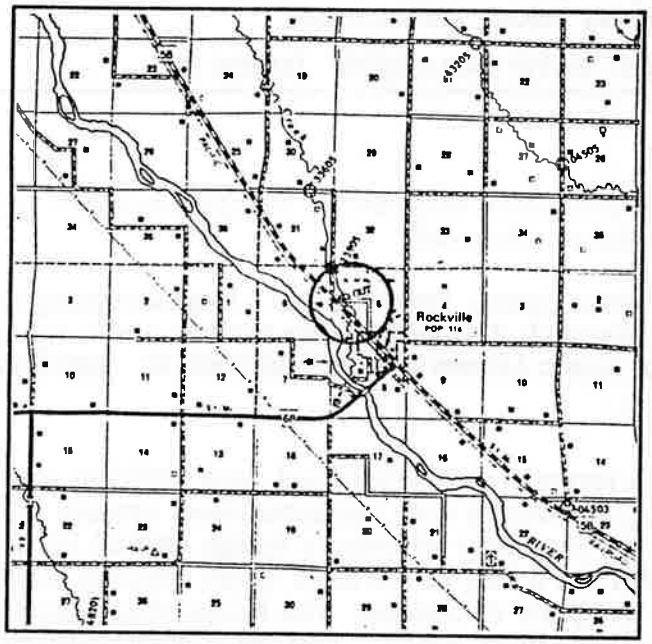
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt half-hip pony truss with timber stringer approach span
span length:	40.0'	substructure:	steel pile bent abutments and pier with timber wingwalls
total length:	40.0'	floor/decking:	timber decking over steel stringers
roadway wdt.:	16.0'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars; vertical: 4 angles with lacing; diagonal: 2 looped square eyebars and 1 square eyebar; lateral bracing: round bar; floor beam: I-beam U-bolted to vertical; guardrail: 2 angles

In July 1912 the Sherman County Board of Supervisors traveled to Rockville to inspect a recently completed steel span addition to the bridge over the Loup River, southwest of town. To get to the new bridge from Loup City, the county seat, the supervisors crossed Rock Creek on the county road immediately north of Rockville in the west half of Section 5. It is unclear whether a bridge existed here or whether the stream was simply forded, but the supervisors were apparently concerned with the utility of the Rock Creek crossing during that trip. On August 21st they ordered a new steel structure from the Standard Bridge Company of Omaha. The bridge that Standard erected here was a pinned Pratt half-hip pony truss, with a 40-foot span and a 16-foot roadway width. This short-span truss was supported by eight 24-foot "Plan A" steel piles, joined together to form a bent by a top sill and diagonal sway braces. The Rock Valley Bridge was completed by November 1912. It carried traffic with minimal maintenance, first on the primary route between Loup City and Rockville and later, with the completion of State Highway 58, as a secondary route. Eventually the county abandoned the structure with the right-of-way, selling it to the adjacent landowner in 1987.

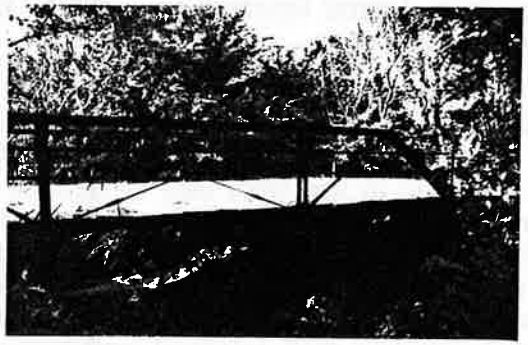
The Rock Creek Bridge displays the typical configuration, detailing and dimensions of Nebraska's most common vehicular truss type.

NAME(S) OF STRUCTURE
Rock Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Proceedings of the Sherman County Board of Supervisors: 10 July 1912 (p. 28), 21 August 1912 (p. 41), located at Sherman County Courthouse, Loup City, Nebraska; field inspection by Clayton Fraser, 7 July 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Montrose Bridge
NDOR: C008301205P

SIOU01

DATE(S) OF CONSTRUCTION
1915-16

LOCATION
county road over Hat Creek; S13, T34N, R55W
18.0 miles northeast of Harrison; Sioux County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 43)

CONDITION
good

OWNER
Sioux County

span number: 1
span length: 100.0'
total length: 102.0'
roadway wdt.: 15.6'

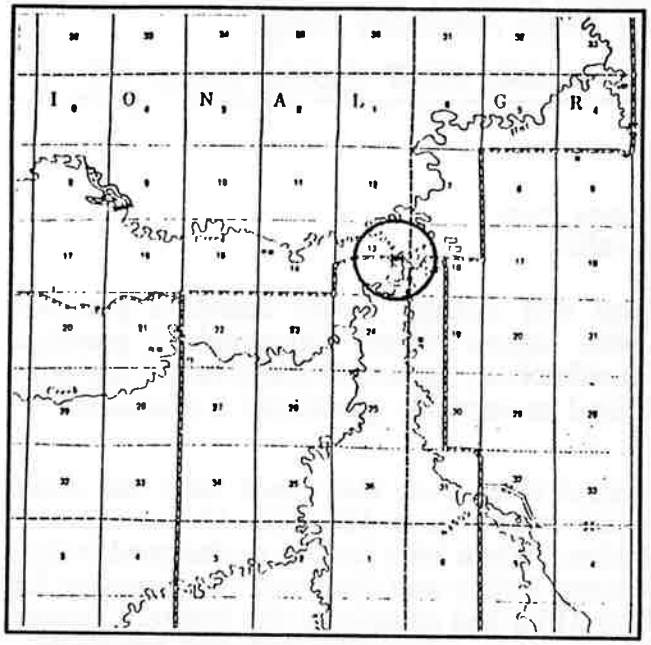
superstructure: steel, 5-panel, pin- / rigid-connected Pratt pony truss
substructure: steel pile bent abutments with timber wingwalls
floor/decking: timber decking (on end) over steel stringers
other features: upper chord: 2 channels with cover plates and lacing; lower chord: 2 punched rectangular eyebars; vertical: 4 angles with batten plates; diagonal: 2 punched rectangular eyebars, 2 square eyebars with turnbuckles; lateral bracing: round bar with threaded ends; floor beam: I-beam, field bolted to vertical; guardrail: 2 channels

Early in August 1915 the Sioux County Commissioners received bids to erect a 96-foot steel truss over Hat Creek near the small settlement of Montrose. The commissioners rejected all the proposals as too high and re-advertised for a 100-foot, 15-ton capacity standard span by the Nebraska Highway Department, to be carried by 8-inch Bethlehem H-piles. When bids for the re-designed bridge were received in September, the commissioners awarded the construction contract to the Western Bridge and Construction Company for $3400. The Omaha-based contractor began work on the steel piles soon thereafter and by May 1916 had completed the bridge. Located in a remote section of a sparsely settled county, the Montrose Bridge has carried light traffic since, in essentially unaltered condition.

Standard plans delineated by the state highway department included pony trusses with spans ranging from 40 to 100 feet. With a 100-foot span, the Montrose Bridge is among the longest of the pin-connected pony trusses in the state. The bridge is in unaltered condition and retains a high degree of structural integrity; it is one of the better single-span examples of this widely used Nebraska standard structural configuration.

NAME(S) OF STRUCTURE
Montrose Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C008301205P; Sioux County Commissioners' Record, Book C: 2 August 1915 (pp. 347-48), 7 September 1915 (p. 355), 24 January 1916 (p. 392), 20 May 1916 (p.408), located at the Sioux County Courthouse, Harrison, Nebraska; field inspection by Clayton Fraser, 23 April 1990.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Interstate Canal Siphon
NDOR: C008302905

SIOU02

DATE(S) OF CONSTRUCTION
1908

LOCATION
county road over Interstate Canal; S12, T24N, R55W
14.5 miles northwest of Scottsbluff; Sioux County, Nebraska

USE (ORIGINAL / CURRENT)
roadway culvert / roadway culvert

RATING potentially NRHP eligible (score: 42)

CONDITION
excellent

OWNER
Sioux County

span number:	2	superstructure:	concrete siphon
span length:	10.0'	substructure:	concrete abutments and wingwalls
total length:	22.0'	floor/decking:	dirt over concrete deck
roadway wdt.:	30.0'	other features:	concrete curbing; **USRS 1908** formed in relief in concrete on side walls

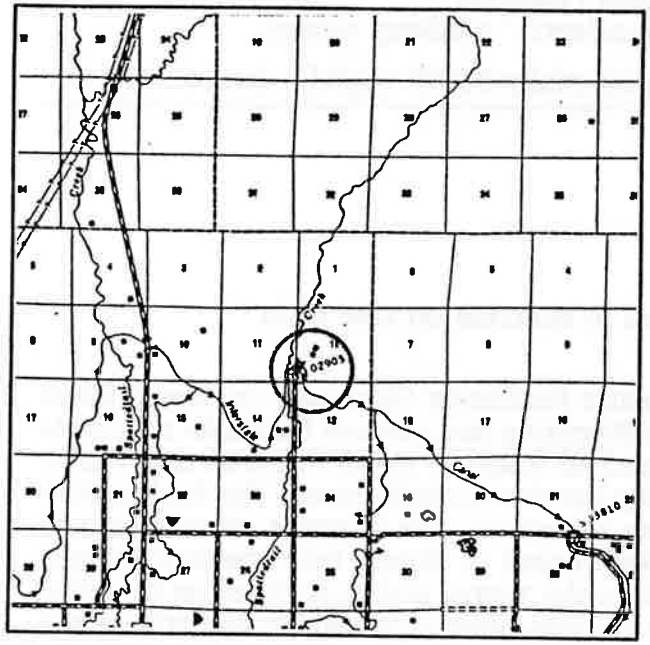
The heart of the North Platte Project designed by the U.S. Reclamation Service was the immense Pathfinder Dam over the North Platte River near Alcova, Wyoming. But the arteries of this extensive project extended across eastern Wyoming and western Nebraska to irrigate vast amounts of arid rangeland. A major part of the original project, the Interstate Canal branched from the North Platte at the Whalen Diversion Dam near Guernsey, Wyoming, and ran across northwestern Nebraska before rejoining the river at Bridgeport. The Reclamation Service constructed the canal while the dam was still under construction in 1907-09, building this small-scale concrete structure where a Sioux County road crossed the canal. Although listed as a box culvert by the Nebraska Department of Roads, this structure actually functions as a siphon, with water from the canal dropped beneath the roadway through a rectangular tunnel and re-elevated on the other side through siphoning action. The Interstate Canal Siphon was built in 1908 as part of the original canal construction and still carries intermittent traffic in this sparsely settled region, without major alteration.

Authorized in 1905, the North Platte Project was one of the Reclamation Service's initial undertakings, and is therefore nationally significant for its formative role in federal reclamation in the West. The Interstate Canal and its associated structures are historically and technologically important as integral components of the project. The significance of this small-scale siphon lies more within the reclamation context for its association with the North Platte Project than it does within the context of transportation and bridge technology, however. The Interstate Canal may prove NRHP eligible, but it should not be considered as such within the context of the statewide bridge inventory.

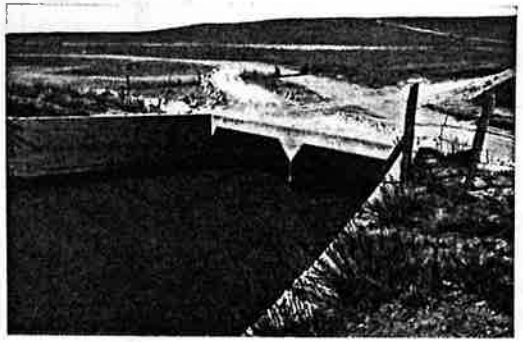
NAME(S) OF STRUCTURE

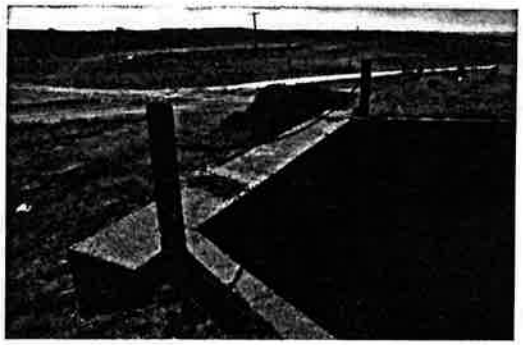
Interstate Canal Siphon

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C008302905; E.H. Baldwin, "Construction on the Pathfinder Dam, North Platte Project, U.S. Reclamation Service," **Engineering News**, vol. 60, no. 8 (29 October 1908), pp. 461-63; E.H. Baldwin, "Construction of the Pathfinder Dam, North Platte Project, United States Reclamation Service," **Engineering Record**, vol. 58, no. 19 (7 November 1908); Donald C. Jackson, **Great American Bridges and Dams** (Washington, D.C.: the Preservation Press, 1988), pp. 316-17; field inspection by Clayton Fraser, 23 April 1990.

INVENTORIED BY

Clayton B. Fraser

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Union Creek Bridge
NDOR: C008401110

STAN01

DATE(S) OF CONSTRUCTION
1921

LOCATION
county road over Union Creek; S1/2, T22N, R1E
4.2 miles southwest of Stanton; Stanton County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 36)

CONDITION
good

OWNER
Stanton County

span number: 1
span length: 90.0'
total length: 194.0'
roadway wdt.: 15.5'

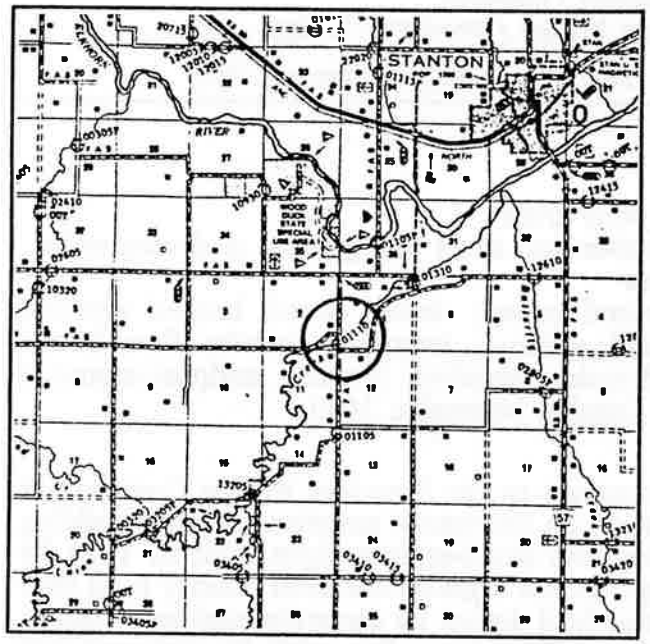
superstructure: steel, 6-panel, pin- / rigid-connected Pratt pony truss
substructure: steel pile bent piers and abutments with timber and sheet piling back- and wingwalls
floor/decking: timber deck over transverse I-beam stringers
other features: upper chord: 2 channels with cover plate and lacing; lower chord: looped eyebars; vertical: 2 pair angles with battens; diagonal: eyebars; counter: eyerods; floor beam: I-beam; lateral bracing: rod with threaded ends; guardrail: lattice; endpost-mounted builder's plate: **Standard Bridge Company, Omaha, Nebraska, 1921**

Late in 1920 the Stanton County Commissioners awarded an annual bridge construction contract to the Standard Bridge Company of Omaha, as they had done every year previously since 1900. That year the county undertook an extremely ambitious bridge building program, eventually ordering 108 structures with an aggregate value of $165,000. Among the small-scale bridges built in 1921 by Standard Bridge was this pinned Pratt pony truss. Located southwest of Stanton, the bridge carries a gravel-surfaced county road over Union Creek in the central part of Stanton County. The truss itself was a straightforward standard design by the state engineer's office, featuring bolted gusset plates at the upper chords to form a pin-/rigid-connected hybrid configuration. But with its stringers laid transversely between the lower chords, the bridge's floor system more resembles a transverse joist girder. Standard Bridge had developed the transverse joist girder design in the early 1910s, and the firm erected a number of pony trusses around Nebraska in the early 1920s using this configuration.

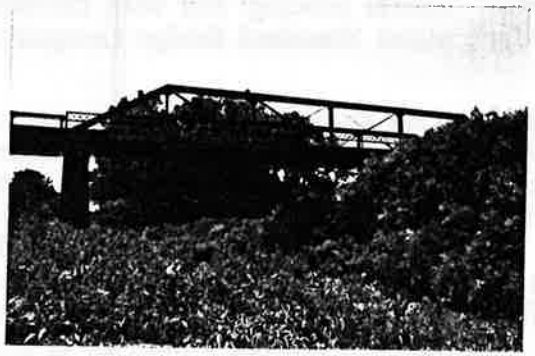
This bridge is typical of the many small structures built by the counties during the first quarter of this century in response to the public's demand for adequate transportation networks.

NAME(S) OF STRUCTURE
Union Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C008401110; builder's plate on bridge; Stanton County Commissioners' Record, Book 5: 9 November 1920 (page 280), 6 August 1921 (page 361), 17 August 1921 (page 365), located at the Stanton County Courthouse, Stanton, Nebraska; field inspection by Lon Johnson, 20 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Union Creek Bridge
NDOR: C008401310

STAN02

DATE(S) OF CONSTRUCTION
1916; moved 1962

LOCATION
county road over Union Creek; S1/6, T22N, R1/2E
2.9 miles southwest of Stanton; Stanton County, Nebraska

USE (ORIGINAL / CURRENT)
highway bridge / roadway bridge

RATING potentially NRHP eligible (score: 41)

CONDITION
good

OWNER
Stanton County

span number: 1
span length: 175.0'
total length: 177.0'
roadway wdt.: 15.9'

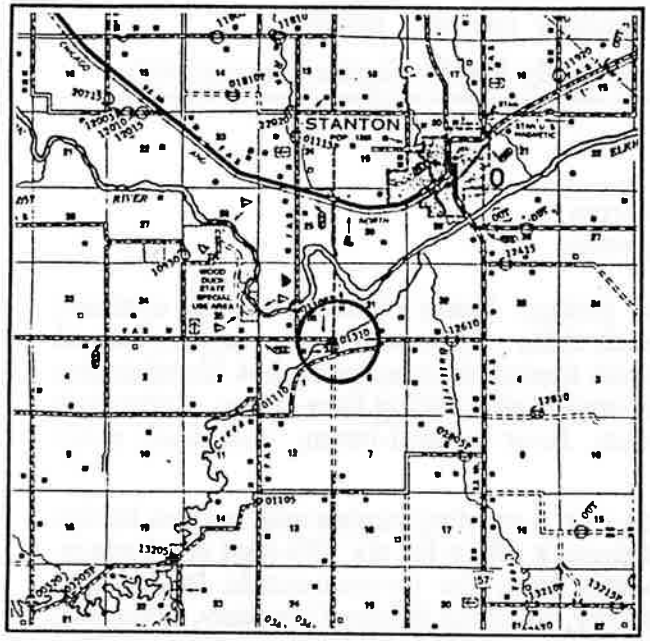
superstructure: steel, 10-panel, pin-connected Parker through truss
substructure: steel I-beam piles with timber back- and wingwalls
floor/decking: timber deck over I-beam stringers
other features: upper chord: 2 channels with cover plate and lacing; lower chord: punched eyebars; vertical: 2 channel sections with lacing bars each side; diagonal: bars; counter: eyerod with turnbuckle; bottom lateral bracing: rod with threaded ends; portal: 4 X's of angles with knee braces; struts: built-up panels, 2 pair angles with lacing bars at top, 2 channels with lacing bars at bottom, rods crossed between; floor beam: I-beam; guardrail: cable

Early in 1910 the boards of Colfax and Butler counties acted to replace the main channel section of the existing timber pile wagon bridge across the Platte River south of Schuyler. In May they adopted the plans drawn by the state engineer's office for six 175-foot steel spans. The counties immediately advertised for competitive bids, and a month later received proposals from the Intermountain Bridge and Construction Company, Western Bridge and Construction Company, Monarch Engineering Company, Midland Bridge Company, Nebraska Construction Company, Beach Manufacturing Company, Canton Bridge Company, Empire Bridge Company and the Elkhorn Construction Company. The construction contract went to Elkhorn, and the Fremont-based contractor began work on the structure soon thereafter. As completed in 1911, the Schuyler Bridge consisted of the six new pinned Parker through trusses, approached on the north by a 325-foot timber trestle and on the south by a 1055-foot trestle. In 1916 the structure was designated a state aid bridge, and the state engineer's office removed the timber trestle approaches and replaced them with four new 175-foot through trusses, built in 1916-17 by the Elkhart Bridge and Iron Company of Elkhart, Indiana (cost: $32,000 for the new spans; $17,000 to repair the existing bridge). The Schuyler State Aid Bridge carried regional traffic until its replacement in the early 1960s. In 1962 Stanton County acquired two of the original 175-foot trusses (probably the 1916 spans, but this is not clear), dismantled and moved them, and re-erected them as single-span bridges over Union Creek.

During the formative years of the state aid bridge program, the Nebraska state engineer designed several long-span through trusses. Among these were the Parshall State Aid Bridge, the Redbird State Aid Bridge, the Fremont State Aid Bridge, the Gross State Aid Bridge and the Schuyler State Aid Bridge. This structure is one of four spans salvaged from Schuyler (the others: STAN07, ROCK01, BROW01). It has lost the considerable historical significance accrued by the original Schuyler State Aid Bridge. But the Union Creek Bridge retains its technological significance as a well-preserved early example of state-designed pin-connected truss construction.

NAME(S) OF STRUCTURE
Union Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C008401310; Colfax County Commissioners' Record, Book 5: 10 May 1910 (pages 539-40), 27 June 1910 (page 545), located at Colfax County Courthouse, Schuyler, Nebraska; Aivars G. Ronis, "Nebraska State Aid Bridges," typewrittren report by Nebraska Department of Roads, September 1971, revised 1978, n.p.; Nebraska State Board of Irrigation, Highways and Drainage, **Eleventh Biennial Report**, 1915-16, pages 185, 190-91; field inspection by Lon Johnson, 20 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Cedar Creek Bridge
NDOR: C008402735

STAN03

DATE(S) OF CONSTRUCTION
ca.1905

LOCATION
county road over Cedar Creek; S7/8, T22N, R3E
7.0 miles southeast of Stanton; Stanton County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 31)

CONDITION
fair

OWNER
Stanton County

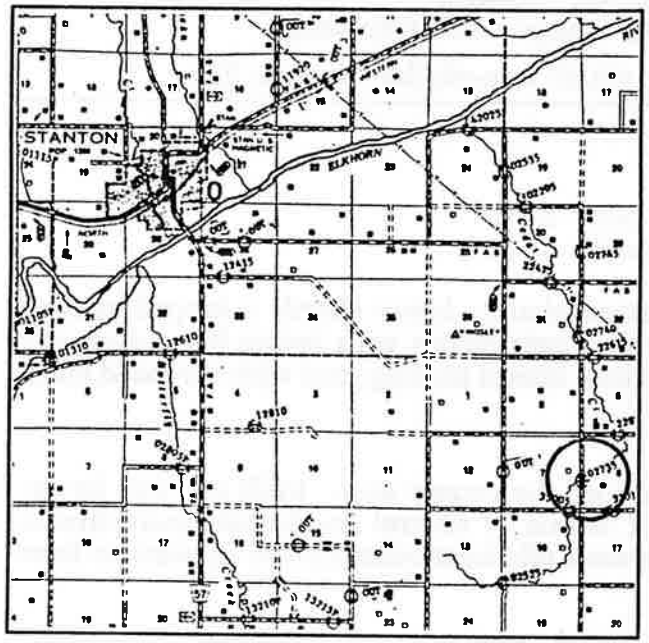
span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt half-hip pony truss
span length:	60.0'	substructure:	steel pile bent abutments with timber wingwalls
total length:	61.0'	floor/decking:	concrete deck over I-beam stringers
roadway wdt.:	15.5'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 looped eyebars at hips, punched eyebars at middle; vertical: 2 pair angles with lacing bars; diagonal: square eyerod at hips, round eyerods remainder; lateral bracing: rod with threaded ends; floor beam: I-beam; guardrails: lattice

This bridge carries an unpaved section-line road over Cedar Creek 7 miles southeast of Stanton, the county seat. Built ca.1905 by the Standard Bridge Company of Omaha using components rolled in Pittsburgh by Cambria, it is one of several small-scale pony trusses erected for the county during the early 1900s. The truss itself remains intact, although the steel pile bent substructure appears to have been replaced entirely.

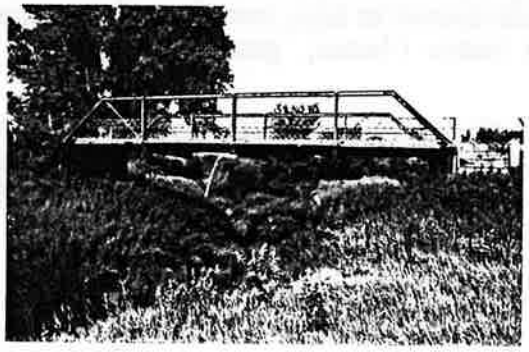
The Cedar Creek Bridge is a typical example of a common short-span vehicular truss type.

NAME(S) OF STRUCTURE
Cedar Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C008402735; field inspection by Lon Johnson, 20 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Union Creek Bridge
NDOR: C008403605P

STAN04

DATE(S) OF CONSTRUCTION
ca.1905

LOCATION
county road over Union Creek; S31, T22N, R1E
10.5 miles southwest of Stanton; Stanton County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 25)

CONDITION
good

OWNER
Stanton County

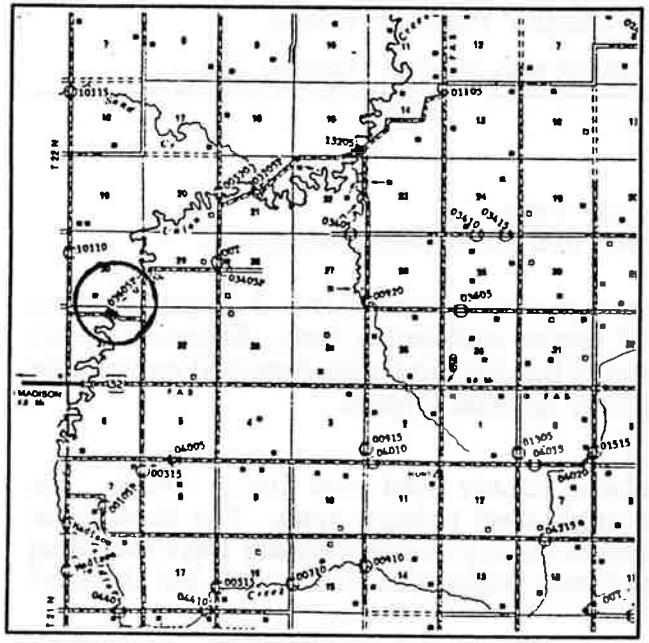
span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt half-hip pony truss
span length:	60.0'	substructure:	steel pile bent pier and abutments, with timber and sheet piling wingwalls
total length:	89.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.7'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 looped eyebars at hips, punched eyebars at middle; vertical: 2 angles with lacing bars; diagonal: square eyerods; counter: eyerod with turnbuckle; lateral bracing: rod with threaded ends; floor beam: I-beam; guardrails: lattice extending over approach spans

Located 10-1/2 miles southwest of Stanton, this small-scale pony truss carries a gravel-surfaced county road over Union Creek. The structure consists of a single pinned Pratt half-hip pony truss, approached on each side by a single steel stringer span. The dimensions and detailing of the truss indicate a fabrication date of around 1905, a period in which the Stanton County Commissioners were awarding annual bridge contracts to the Standard Bridge Company of Omaha. The truss of the Union Creek Bridge remains intact, but the steel pile bent substructure appears to have been replaced entirely.

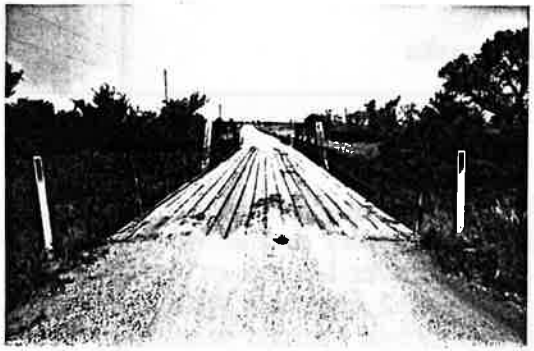
Displaying an average degree of physical integrity, the Union Creek Bridge is a relatively undistinguished example of a common vehicular truss type.

NAME(S) OF STRUCTURE
Union Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C008403605P; field inspection by Lon Johnson, 20 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C008404005

STAN05

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over intermittent stream; S5/8, T21N, R1E
11.4 miles southwest of Stanton; Stanton County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 34)

CONDITION
good

OWNER
Stanton County

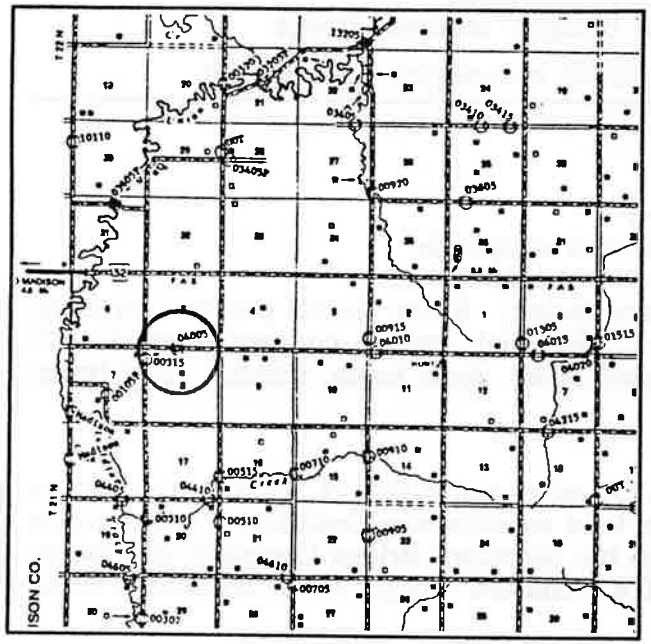
span number:	1	superstructure:	steel, 6-panel, pin-connected Pratt pony truss
span length:	95.0'	substructure:	steel pile bent abutments with concrete infill and wingwalls
total length:	96.0'	floor/decking:	wood 2x4s set diagonally on edge over transverse I-beams
roadway wdt.:	15.1'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: punched eyebars; vertical: 2 pair angles with batten plates; diagonal: bars; counter: eyerod with turnbuckle; lateral bracing: rod with threaded ends; floor beam: I-beam; guardrails: lattice extending over approach spans

This single-span pony truss carries an unpaved county road across an intermittent stream 11.4 miles southwest of Stanton, the county seat. The configuration, detailing and 15-foot roadway width of the truss, with its steel pile bent substructure, indicates a construction date around 1910. From 1900 until the 1920s, Stanton County contracted exclusively with the Standard Bridge Company of Omaha, one of Nebraska's most prolific bridge erectors. This structure displays the earmarks of a Standard Bridge truss, fabricated using components rolled by the Inland steel mills, it remains essentially unaltered.

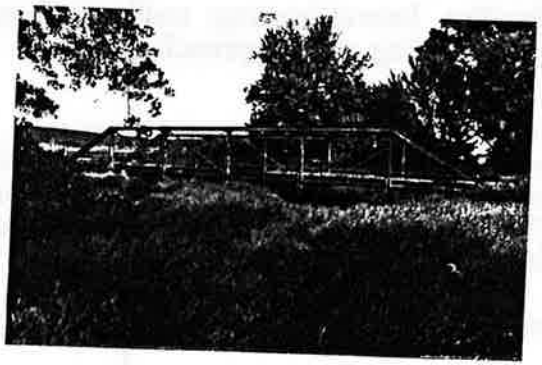
Built during a period of extensive bridge construction activity in Stanton County, this bridge is a typical example of Nebraska's most common truss type: the pinned Pratt pony.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C008404005; field inspection by Lon Johnson, 20 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Maple Creek Bridge
NDOR: C008404035

STAN06

DATE(S) OF CONSTRUCTION
ca.1905

LOCATION
county road over East Fork of Maple Creek; S2/11, T21N, R3E
13.0 miles southeast of Stanton; Stanton County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 31)

CONDITION
good

OWNER
Stanton County

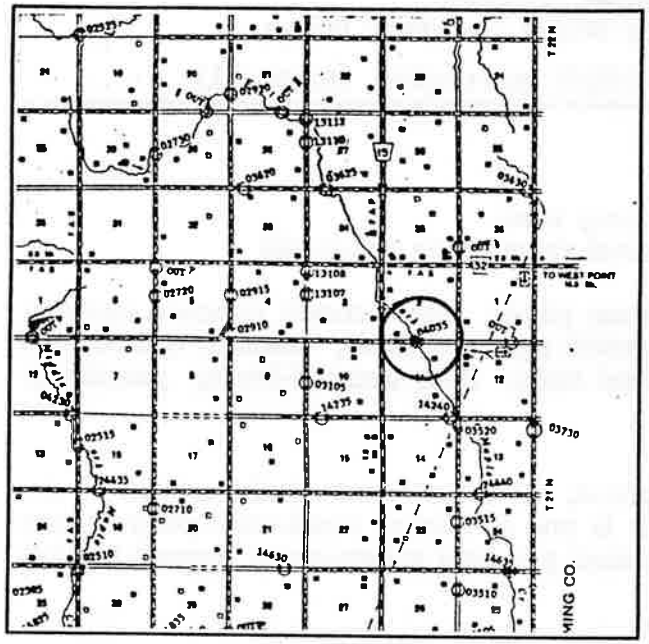
span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt half-hip pony truss
span length:	60.0'	substructure:	steel pile bent abutments with timber and steel sheet piling wingwalls
total length:	60.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	16.0'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: punched eyebars; vertical: 2 pair angles with lacing bars; diagonal: square eyerods; counter: eyerod with turnbuckle; lateral bracing: rod with threaded ends; floor beam: I-beam; guardrails: lattice

This bridge carries an unpaved section-line road over Maple Creek 13 miles southeast of Stanton, the county seat. Built ca.1905 by the Standard Bridge Company of Omaha using components rolled in Pittsburgh by Cambria, it is one of several small-scale pony trusses erected for the county during the early 1900s. The truss itself remains intact, although the steel pile bent substructure appears to have been replaced entirely.

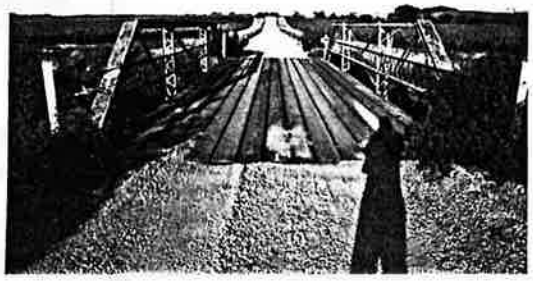
The Maple Creek Bridge is a typical example of a common short-span vehicular truss type.

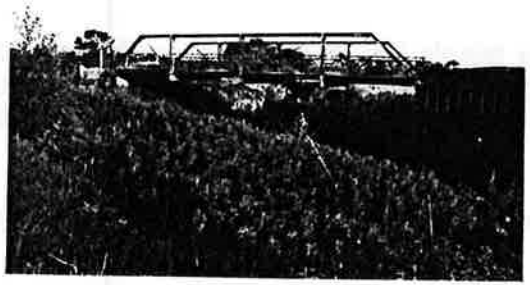
NAME(S) OF STRUCTURE
Maple Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C008404035; field inspection by Lon Johnson, 20 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Union Creek Bridge
NDOR: C008413205

STAN07

DATE(S) OF CONSTRUCTION
1916

LOCATION
county road over Union Creek; S15, T22N, R1E
6.5 miles southwest of Stanton; Stanton County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 41)

CONDITION
fair

OWNER
Stanton County

span number: 1
span length: 175.0'
total length: 176.0'
roadway wdt.: 16.3'

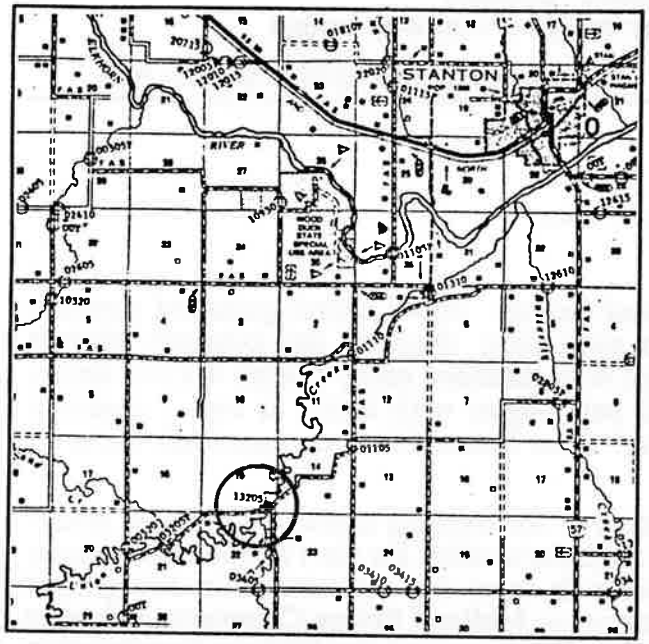
superstructure: steel, 10-panel, pin-connected Parker through truss
substructure: steel I-beam piles with plank backwalls
floor/decking: plank on plank over I-beam stringers
other features: upper chord: 2 channels with cover plate and lacing; lower chord: punched eyebars; vertical: 2 channel sections with lacing bars each side; diagonal and counter: mixture of bars, rods, square rods; lateral bracing: rod with threaded ends; portal: 4 X's of angles with knee braces; struts: built-up panels, 2 pair angles with lacing at top, 2 channels with lacing at bottom, rods crossed between; floor beam: I-beam; guardrail: cable

Early in 1910 the boards of Colfax and Butler counties acted to replace the main channel section of the existing timber pile wagon bridge across the Platte River south of Schuyler. In May they adopted the plans drawn by the state engineer's office for six 175-foot steel spans. The counties immediately advertised for competitive bids, and a month later received proposals from the Intermountain Bridge and Construction Company, Western Bridge and Construction Company, Monarch Engineering Company, Midland Bridge Company, Nebraska Construction Company, Beach Manufacturing Company, Canton Bridge Company, Empire Bridge Company and the Elkhorn Construction Company. The construction contract went to Elkhorn, and the Fremont-based contractor began work on the structure soon thereafter. As completed in 1911, the Schuyler Bridge consisted of the six new pinned Parker through trusses, approached on the north by a 325-foot timber trestle and on the south by a 1055-foot trestle. In 1916 the structure was designated a state aid bridge, and the state engineer's office removed the timber trestle approaches and replaced them with four new 175-foot through trusses, built in 1916-17 by the Elkhart Bridge and Iron Company of Elkhart, Indiana (cost: $32,000 for the new spans; $17,000 to repair the existing bridge). The Schuyler State Aid Bridge carried regional traffic until its replacement in the early 1960s. In 1962 Stanton County acquired two of the original 175-foot trusses (probably the 1916 spans, but this is not clear), dismantled and moved them, and re-erected them as single-span bridges over Union Creek.

During the formative years of the state aid bridge program, the Nebraska state engineer designed several long-span through trusses. Among these were the Parshall State Aid Bridge, the Redbird State Aid Bridge, the Fremont State Aid Bridge, the Gross State Aid Bridge and the Schuyler State Aid Bridge. This structure is one of four spans salvaged from Schuyler (the others: **STAN02, ROCK01, BROW01**). It has lost the considerable historical significance accrued by the original Schuyler State Aid Bridge. But the Union Creek Bridge retains its technological significance as a well-preserved early example of state-designed pin-connected truss construction.

NAME(S) OF STRUCTURE
Union Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C008413205; Colfax County Commissioners' Record, Book 5: 10 May 1910 (pages 539-40), 27 June 1910 (page 545), located at Colfax County Courthouse, Schuyler, Nebraska; Aivars G. Ronis, "Nebraska State Aid Bridges," typewrittren report by Nebraska Department of Roads, September 1971, revised 1978, n.p.; Nebraska State Board of Irrigation, Highways and Drainage, Eleventh Biennial Report, 1915-16, pages 185, 190-91; field inspection by Lon Johnson, 20 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Maple Creek Bridge
NDOR: C008414635

STAN08

DATE(S) OF CONSTRUCTION
ca.1905

LOCATION
county road over East Fork of Maple Creek; S24/25, T21N, R3E
16.3 miles southeast of Stanton; Stanton County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 28)

CONDITION
fair

OWNER
Stanton County

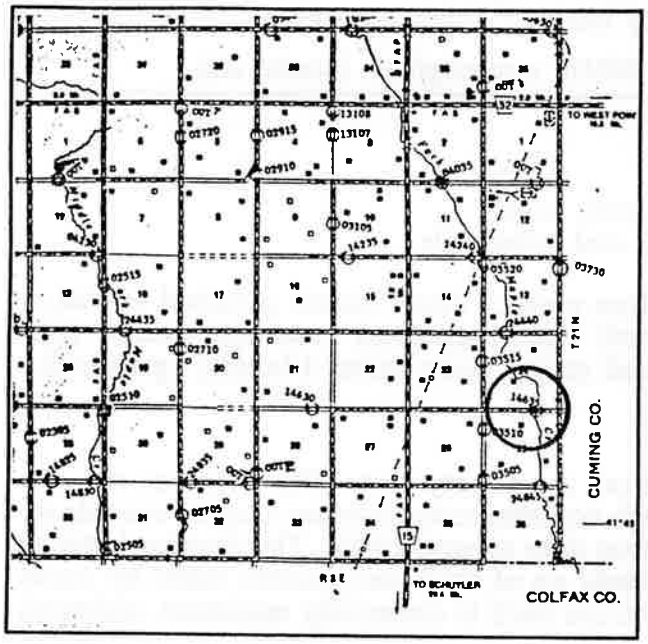
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt half-hip pony truss
span length:	50.0'	substructure:	steel pile bents with steel sheet piling back- and wingwalls
total length:	51.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.8'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: punched eye-bars; vertical: 2 pair angles with lacing; diagonal: square eyerods; counter: eyerod with turnbuckle; lateral bracing: rod with threaded ends; floor beam: I-beams; guardrails: lattice

This small-scale bridge carries a gravel-surfaced road across Maple Creek, southeast of Stanton, the county seat. The structure consists of a single pinned Pratt half-hip pony truss, supported by steel pile bent abutments. Although contemporary Stanton County records do not mention this structure specifically, the truss's detailing and dimensions suggest a fabrication date around 1905. The Standard Bridge Company of Omaha held the county's annual bridge contracts from 1900 until the 1920s. Made up of steel components rolled by Jones and Laughlin, this truss displays the earmarks of a Standard Bridge Company structure. The truss itself is essentially unaltered, although the substructure appears to have been replaced.

The Maple Creek Bridge is a typical example of a common structural type.

NAME(S) OF STRUCTURE
Maple Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C008414635; field inspection by Lon Johnson, 20 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Humbug Creek Bridge
NDOR: C008420815

STAN09

DATE(S) OF CONSTRUCTION
ca.1905

LOCATION
county highway over Humbug Creek; S17/20, T24N, R3E
4.0 miles northwest of Pilger; Stanton County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 31)

CONDITION
good

OWNER
Stanton County

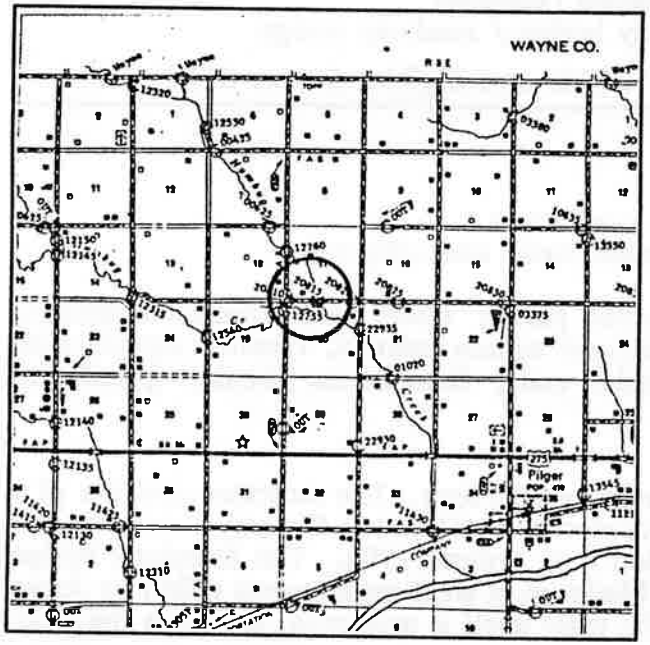
span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt half-hip pony truss
span length:	60.0'	substructure:	steel pile bent abutments and pier with timber back- and wingwalls
total length:	83.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.3'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: punched eyebars; vertical: 2 pair angles with lacing bars; diagonal: square eyerods; counter: eyerod with turnbuckle; lateral bracing: rod with threaded ends; floor beam: I-beam; guardrails: lattice

This small-scale bridge carries a gravel-surfaced road across Humbug Creek, four miles northwest of Pilger. The structure consists of a single pinned Pratt half-hip pony truss, supported by steel pile bent abutments. Although contemporary Stanton County records do not mention this structure specifically, the truss's detailing and dimensions suggest a fabrication date around 1905. The Standard Bridge Company of Omaha held the county's annual bridge contracts from 1900 until the 1920s. Made up of steel components rolled by Jones and Laughlin, this truss displays the earmarks of a Standard Bridge Company structure. The truss itself is unaltered, although the floor beams and substructure appear to have been replaced.

The Humbug Creek Bridge is a typical example of a common structural type.

NAME(S) OF STRUCTURE
Humbug Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C008420815; field inspection by Lon Johnson, 20 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Big Sandy Creek Bridge
NDOR: C008500335

THAY01

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
county road over Big Sandy Creek; S7/8, T4N, R4W
1 mile north of Davenport; Thayer County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 14)

CONDITION
poor

OWNER
Thayer County

span number:	1	superstructure:	steel, 3-panel, pinned Pratt half-hip pony truss
span length:	50.0'	substructure:	steel pile bent abutments with timber back and wingwalls
total length:	50.0'	floor/decking:	timber over steel stringers
roadway wdt.:	19.5'	other features:	upper chord: back-to-back channels with cover plate and battens; lower chord: 2 punched eyebars; vertical: 4 angles with battens; diagonal: 2 punched eyebars; counter: eyebar with turnbuckle; bottom lateral: cross-braced circular-section eyerod; floor beam: I-beam connected to superstructure by means of U-bolts

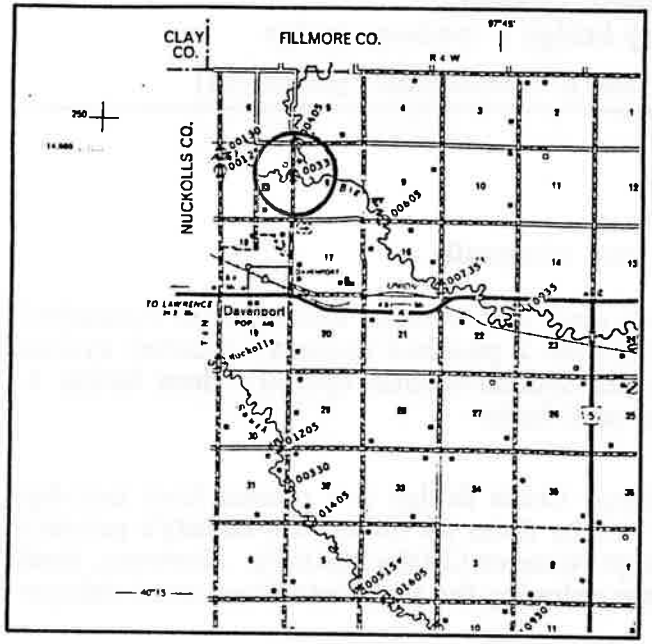
Located on the line between Sections 7 and 8, T4N, R4W in Davenport Precinct, the Big Sandy Creek Bridge is a pinned Pratt half-hip pony truss supported by steel pile bent abutments. This structure was probably built ca.1915 by John M. Dillie, the county's primary bridge builder. Dillie built a similar half-hip Pratt pony truss in the county in 1912 (see Bridge Number C008514505P). However, steel piles were subsequently added beneath each floor beam to carry the superstructure, effectively reducing the truss into three steel stringer spans and compromising the structural integrity of the bridge.

Structurally altered, the Sandy Creek Bridge is typical of many half-hip Pratt pony trusses built in Nebraska in the 1910s.

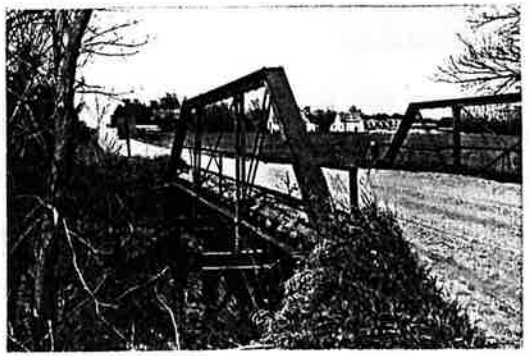
NAME(S) OF STRUCTURE

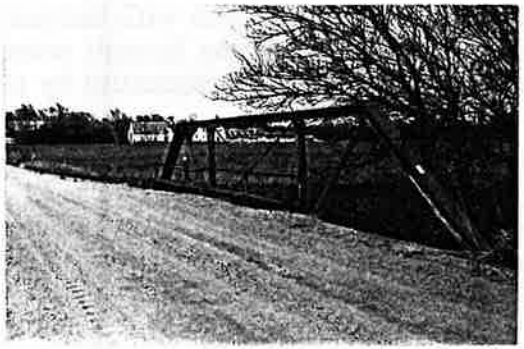
Big Sandy Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C008500335; Proceedings of the Thayer County Commissioners, 1888-1925, located in Thayer County Courthouse, Hebron, Nebraska; field inventory by Jeffrey A. Hess, 25 April 1989.

INVENTORIED BY

Demian Hess

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Hendrick's Bridge THAY02
NDOR: C008500510

DATE(S) OF CONSTRUCTION
ca.1908

LOCATION
county road over Little Blue River; S16/17/20/21, T3N, R4W
2.8 miles west and 5.2 miles north of Deshler; Thayer County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 22)

CONDITION
good

OWNER
county

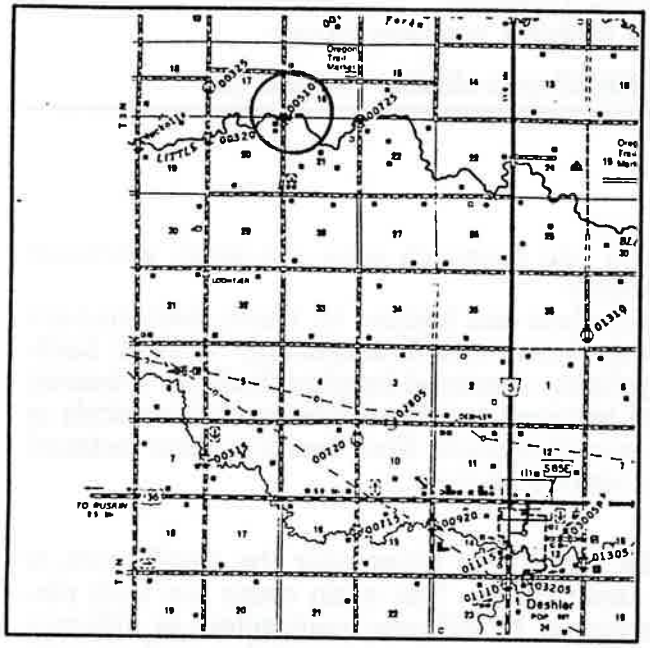
span number:	2	superstructure:	steel, 6-panel, pin-connected Pratt through truss
span length:	100.0'	substructure:	steel cylinder piers and north abutment; wood pile approach piers and south abutment
total length:	247.0'	floor/decking:	double-layer wooden deck over wooden stringers
roadway wdt.:	15.2'	other features:	upper chord: back-to-back channels with cover plate and battens (s. truss), back-to-back channels with cover plate and lacing (n. truss); lower chord: 2 eyebars; vertical: back-to-back channels with lacing; diagonal: 2 eyebars; overhead bracing: built-up T-beams; sway bracing: (n. truss only) 2 angles braced between overhead bracing and verticals in center panel; top and bottom lateral: cross-braced eyerods; floor beam: I-beam fastened to superstructure by hanger plates; railing: welded angles

Located in Kiowa Precinct, Hendrick's Bridge carries a gravel-surfaced county road over the Little Blue River near the small town of Deshler. The bridge consists of two timber stringer approach spans on the south and two main spans. The main spans are both pin-connected Pratt through trusses, yet differ widely in detail, suggesting that they were constructed by different contractors at different times. Differences are visible in the upper chords (V-laced on the north span, battens on the south), lower chord (north has eyebars with circular eyes, south has elliptical eyes), portals, and verticals (channels face outward on north, while lacing faces outward on south). Both trusses are supported by steel cylinder piers cross-braced by circular eyerods. On 3 August 1908, the Thayer County Board awarded a contract to John M. Dillie, a local bridge builder, for a 100-foot steel bridge in Kiowa Precinct. A bridge inspector's report for 1909 identifies the bridge as "Hendrick's Bridge," located on the line between Sections 21 and 20, T3N, R4W. At that time, the bridge was composed of one 100-foot truss and two approach spans measuring 24 and 16 feet. The south truss, which appears to be older, may be the truss installed by Dillie in 1908. The second truss was probably erected after the river widened, perhaps around 1915.

The trusses in this bridge are typical of many other through truss bridges built in Nebraska during the early 1900s.

NAME(S) OF STRUCTURE
Hendrick's Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C008500510; Proceedings of the Thayer County Commissioners, 1888-1925, located in Thayer County Courthouse, Hebron, Nebraska, refer to the following entry: 3 August 1908, Volume 4, p. 4; Bridge Report, 1 January-6 April 1909, located in Bridge Reports Box in vault of County Clerk's Office, Thayer County Courthouse; field inspection by Demian Hess, 22 July 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Little Blue River Bridge THAY03
NDOR: C008500725

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
county road over Little Blue River; S21/22, T3N, R4W
1.8 miles west and 5.3 miles north of Deshler; Thayer County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 22)

CONDITION
good

OWNER
Thayer County

span number: 1
span length: 125.0'
total length: 246.0'
roadway wdt.: 15.7'

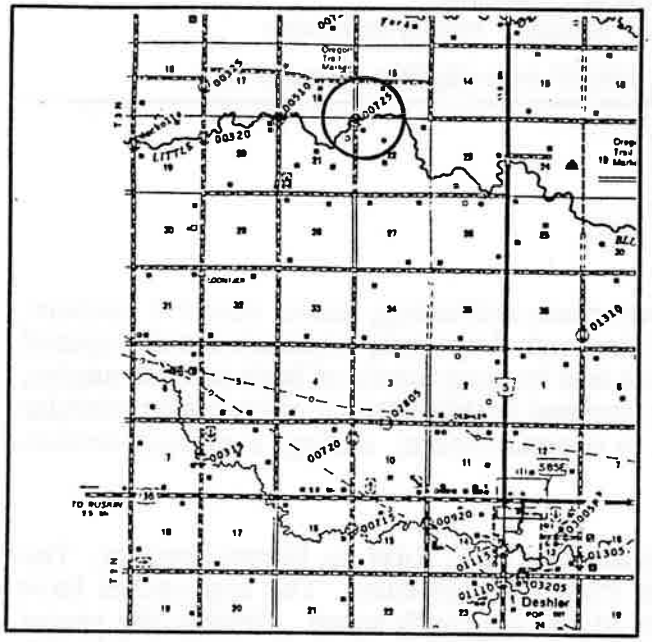
superstructure: steel, 7-panel, pin-connected Pratt through truss
substructure: steel pile bent abutments and piers
floor/decking: steel plate over I-beam stringers
other features: upper chord: back-to-back channels with cover plate and lacing; lower chord: 2 eyebars; vertical: back-to-back channels with lacing; diagonal: 2 eyebars; counter: circular eyerod with turnbuckle; portal: top and bottom struts and bracing consist of back-to-back angles; overhead bracing: 2 angles and a solid plate; top and bottom lateral: cross-braced circular eyerods; floor beam: I-beam hanger-plated to superstructure; railing: 2 channel-section rails on angle posts

The Little Blue River Bridge carries an unpaved county road on the line between Sections 21 and 22, T3N, R4W, in Kiowa Precinct. The structure consists of two steel stringer approach spans on the north, and one pin-connected Pratt through truss. The approaches have concrete decks and flex-metal guard rails. The date "1978" was welded onto the center pier of the approach spans. Despite the recent addition of the approach spans, the truss appears unaltered and is in good physical condition. County records indicate that John M. Dillie, a local bridge contractor, erected a 100-foot steel span on the line between Sections 21 and 22, T3N, R4W in 1908. However, a 96-foot wood pile bridge was apparently also built at this same location in 1910. Physical evidence suggest that this truss probably dates to around 1915. It was probably based on a state design, as the county adopted state standardized bridge plans as early as 1906.

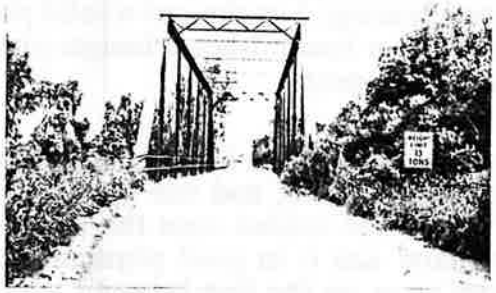
This structure is typical of many through trusses built in Nebraska during the 1910s.

NAME(S) OF STRUCTURE
Little Blue River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C008500725; Proceedings of the Thayer County Commissioners, 1888-1925, located in Thayer County Courthouse, Hebron, Nebraska; Bridge Report, 15 September 1909-1 January 1910, in box marked "Reports of Bridge Work," located in the vault of the County Clerk's Office, Thayer County Courthouse; Bridge contract with John M. Dillie, 8 August 1908, located in box marked "Bonds and Contracts, Bridgework," in the vault in the County Clerk's Office, Thayer County Courthouse; field inspection by Demian Hess, 22 July 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Big Sandy Creek Bridge
NDOR: C008504145

THAY04

DATE(S) OF CONSTRUCTION
ca.1925

LOCATION
county road over Big Sandy Creek; S4/5, T3N, R1W
2.5 miles west of Alexandria; Thayer County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 11)

CONDITION
good

OWNER
Thayer County

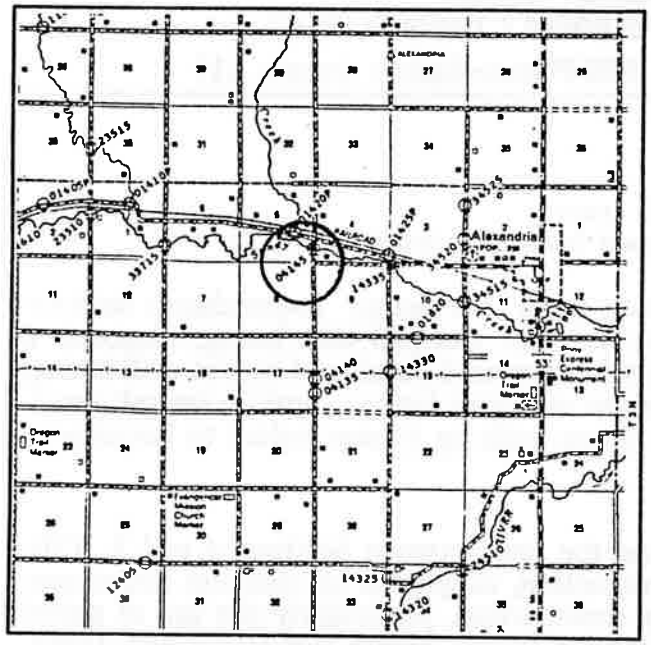
span number:	1	superstructure:	steel, 6-panel, rigid-connected Pratt through truss
span length:	125.0'	substructure:	concrete abutments with perpendicular, sloped back- and wingwalls
total length:	126.0'	floor/decking:	steel plate
roadway wdt.:	25.6'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: back-to-back channels with top and bottom battens; vertical: 4 angles with lacing; diagonal: 2 angles with battens; portal: back-to-back angles; overhead bracing: 4 angles with lacing; top lateral: crossed struts composed of 4 angles tied with lacing; bottom lateral: cross-braced angles tied by center gusset; floor beam: built-up I-beam bolted to bottoms of verticals; railing: angles

The Big Sandy Creek Bridge carries a gravel-surfaced county road in Alexandria Precinct, on the line between Sections 4 and 5, T3N, R1W. The structure is a single-span, rigid-connected Pratt through truss of very heavy construction, supported by concrete abutments. In good condition, the bridge has a high degree of structural integrity. The bridge's heavy construction, particularly the use of paired channel sections in the lower chord rather than angles, as well as its 26-foot roadway width are typical of the late 1920s and 1930s, and the bridge probably dates to ca.1925. According to the Thayer County Highway Superintendent, the bridge was originally on U.S. Highway 136 west of Fairbury, and was moved to its current location sometime around 1974.

The structure is typical of many through trusses constructed by the state highway department in the 1920s and 1930s.

NAME(S) OF STRUCTURE
Big Sandy Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C008504145; Proceedings of the Thayer County Commissioners, 1888-1925, located in the Thayer County Courthouse, Hebron, Nebraska; field inspection by Demian Hess, 21 July 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Sandy Creek Bridge
NDOR: C008514335

THAY05

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
county road over Sandy Creek; S10, T3N, R1W
1.5 miles west of Alexandria; Thayer County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 24)

CONDITION
good

OWNER
county

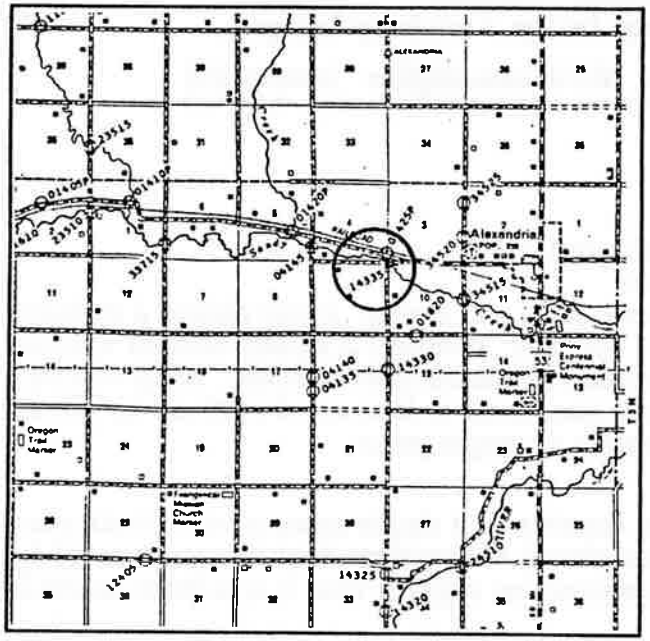
span number:	1	superstructure:	steel, 5-panel, pin-connected Pratt pony truss
span length:	90.0'	substructure:	concrete abutments with flared concrete wingwalls
total length:	91.0'	floor/decking:	double-layer timber deck over steel stringers
roadway wdt.:	15.0'	other features:	upper chord: back-to-back channels with cover plate and lacing; lower chord: 2 eyebars; vertical: 4 angles with battens; diagonal: 2 eyebars; counter: 2 square-section eyerods with turnbuckles; bottom lateral: cross-braced circular-section eyerods; sway bracing: knee braced with angles; floor beam: I-beam connected to bottom of verticals by means of riveted channel plates; railing: 2 angle rails on angle posts

Located in the extreme northeast corner of Section 10, T3N, R1W, the Sandy Creek Bridge consists of a single-span, pinned Pratt pony truss. The truss uses a standard design of the Nebraska Highway Department and features pinned connections that are augmented by gusset plates at the upper chord intersections. The bridge's 15-foot roadway and pinned construction suggest that it was built ca.1915. County records do not indicate a more specific construction date or builder.

This structure is fairly typical of the pinned pony trusses built in Nebraska during the 1910s.

NAME(S) OF STRUCTURE
Sandy Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C008514335; Proceedings of the Thayer County Commissioners, 1888-1925, located in Thayer County Courthouse, Hebron, Nebraska; field inspection by Demian Hess, 21 July 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Thomas Bridge
NDOR: C008514505P

THAY06

DATE(S) OF CONSTRUCTION
1912

LOCATION
county road over Rose Creek; S11, T1N, R1W
6 miles south and 0.3 miles east of Gilead; Thayer County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 32)

CONDITION
good

OWNER
county

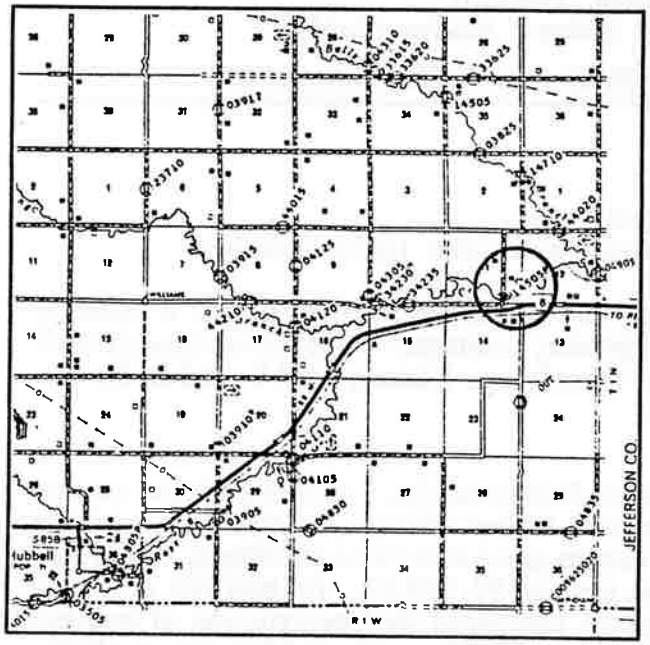
span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt half-hip pony truss
span length:	70.0'	substructure:	north abutment and piers: steel pile bent; south abutment: timber pile bent
total length:	101.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	14.9'	other features:	upper chord: back-to-back channels with top plate and lacing; lower chord: 2 eyebars; vertical: 4 angles with lacing; diagonal: 2 eyebars; counter: 1 square-section eyerod; bottom lateral: cross-braced circular eyerods; floor beam: I-beam, field-bolted to bottom of verticals by hanger plates; railing: angles

Situated in the southeast corner of Section 11, T1N, R1W, of Rose Creek Precinct, the Thomas Bridge carries a gravel-surfaced county road over Rose Creek. The structure is made up of one steel stringer approach on the north, one timber stringer to the south, and one pinned Pratt half-hip pony truss, supported by concrete-filled steel cylinder piers. Unaltered and in good structural condition, the bridge has retained a high degree of integrity. The county erected the bridge in 1912 for a total cost of $2,723.19. Its half-hip design is unusual, because the county supposedly had adopted state plans in 1906. Although these plans precluded the construction of half-hip Pratt trusses, the Thomas Bridge clearly demonstrates that the county continued to build this type of bridge. The bridge was probably erected by John M. Dillie, a local bridge contractor who held all of the county's bridge contracts between 1902 and 1913. A large number of half-hip Pratt pony trusses of nearly identical design still stand in Thayer County, and all can probably be attributed to Dillie. It is not known where Dillie obtained his bridge plans.

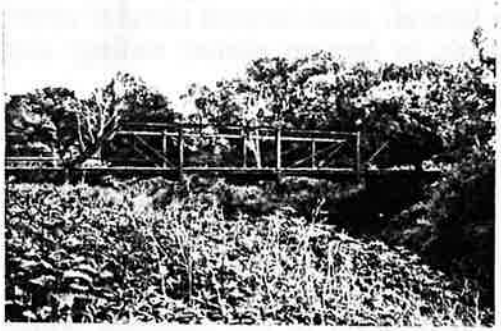
This structure is typical of the numerous half-hip Pratt pony trusses constructed in Nebraska during the 1910s.

NAME(S) OF STRUCTURE
Thomas Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C008514505P; Proceedings of the Thayer County Commissioners, 1888-1925, located in Thayer County Courthouse, Hebron, Nebraska; Bridge Contracts, 1893-1920, located in drawer marked "Bonds and Contracts, Bridgework," in the vault in the County Clerk's Office, Thayer County Courthouse; Bridge Report, 1 September 1912-1 January 1913, located in box marked "Reports of Bridge Work," in vault in County Clerk's Office, Thayer County Courthouse; field inventory by Demian Hess, 22 July 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Big Sandy Creek Bridge
NDOR: C008522315

THAY07

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over Big Sandy Creek; S35/36, T4N, R3W
2.5 miles west, 1.2 miles north of Bellevue; Thayer County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 20)

CONDITION
good

OWNER
Thayer County

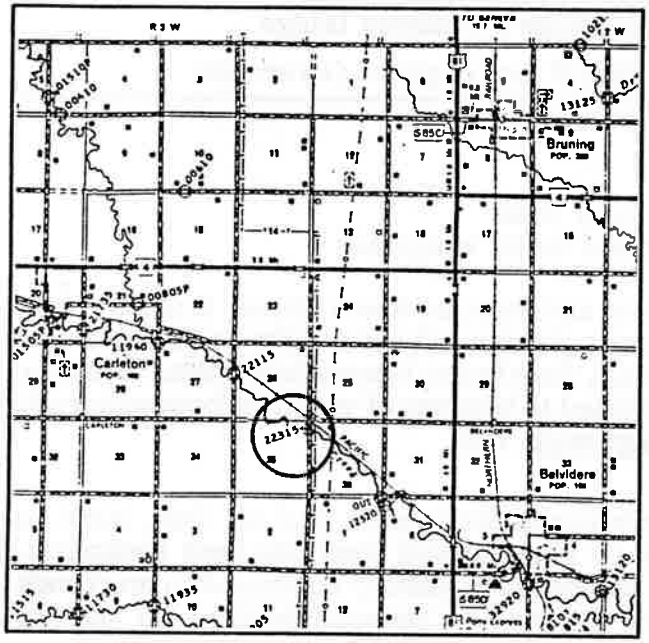
span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt half-hip pony truss
span length:	70.0'	substructure:	steel pile bent abutments with timber back and flared wingwalls
total length:	70.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.6'	other features:	upper chord: 2 channels tied with cover plate and battens; lower chord: 2 rectangular-section eyebars; vertical: 4 angles with battens; diagonal: 2 rectangular-section eyebars; counter: circular-section eyerod with turnbuckle; floor beam: I-beam field-bolted to hanger plates by means of riveted angles - hangers riveted to bottoms of verticals; bottom lateral: cross-braced circular-section eyerods; railing: angle rails

This small-scale truss carries a county road over Big Sandy Creek and is located on the line between Sections 35 and 36, T4N, R3W, in Carleton Precinct. The bridge is a single-span, pinned Pratt half-hip pony truss, supported by new, welded steel pile bent abutments. In 1906, the county adopted state standardized bridge plans, which precluded half-hip Pratt trusses, but evidently continued to erect such structures into the mid-1910s. County records also indicate that a 124-foot truss was built on the line between Sections 35 and 36, Carleton Precinct in 1909. Unfortunately, it is not clear whether this is the same crossing currently occupied by the existing truss.

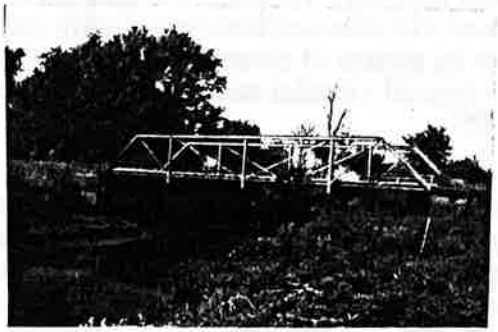
The Big Sandy Creek Bridge is a typical example of the numerous half-hip Pratt pony trusses built in Nebraska during the 1910s.

NAME(S) OF STRUCTURE
Big Sandy Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C008522315; Proceedings of the Thayer County Commissioners, 1888-1925, located in Thayer County Courthouse, Hebron, Nebraska; Bridge Report, 6 April-15 September 1909, located in box marked "Reports of Bridge Work," located in vault in County Clerk's Office, Thayer County Courthouse; field inspection by Demian Hess, 22 July 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bergen Bridge
NDOR: C008523610

THAY08

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
county road over Dry Creek; S29/32, T2N, R2W
3.8 miles south, 0.8 miles east of Hebron; Thayer County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 19)

CONDITION
good

OWNER
Thayer County

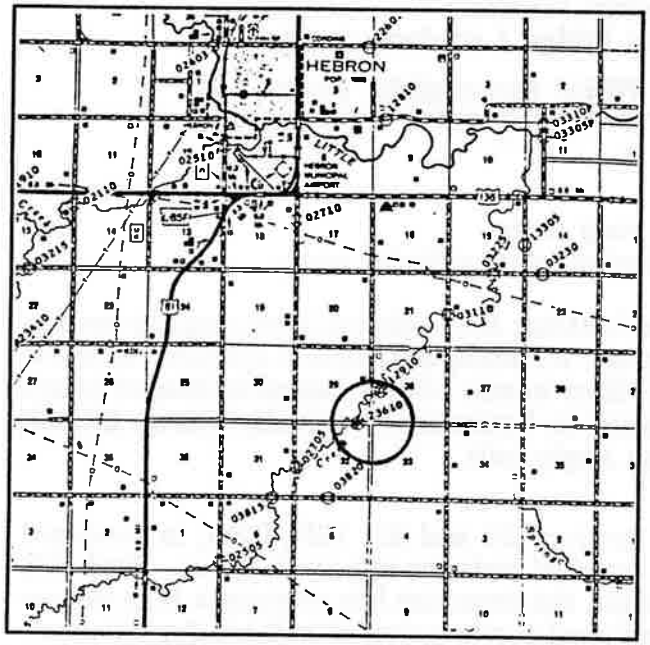
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt half-hip pony truss
span length:	50.0'	substructure:	east abutment: steel pile; west abutment: buried; steel cylinder piers
total length:	78.0'	floor/decking:	steel plate deck over I-beam stringers
roadway wdt.:	15.6'	other features:	upper chord: 2 channels with cover plate and battens; lower chord: 2 rectangular-section eyebars; vertical: 4 angles with lacing; diagonal: 2 rectangular-section eyebars; counter: rectangular-section eyebar with turnbuckle; floor beam: I-beam bolted to hanger plates by means of riveted angles--hangers are riveted to bottoms of verticals; bottom lateral: cross-braced circular-section eyerods; railing: angle rails

The Bergen Bridge carries a county road over Dry Creek and is located on the line between Sections 29 and 32, T2N, R2W, in Stoddard Precinct. The bridge consists of a pinned Pratt half-hip pony truss flanked on both sides by steel stringer approach spans. Probably originally built with a wood deck, which has been replaced by steel plate. Despite this alteration, the structure has retained a high degree of physical integrity. In 1906, the county adopted state standardized bridge plans, which precluded construction of half-hip Pratt trusses, but evidently continued to erect such trusses until the mid-1910s. Although county records are vague with regard to bridge notations, physical evidence on the bridge itself indicates an erection date around 1915.

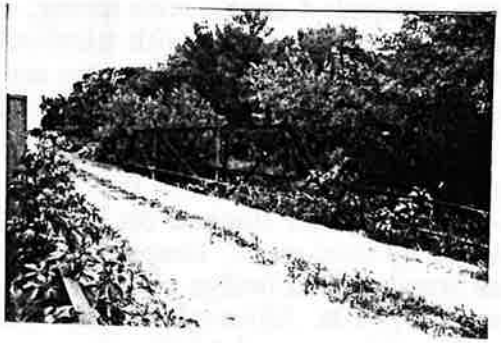
This structure is typical of the many half-hip Pratt pony trusses constructed in Nebraska during the 1910s.

NAME(S) OF STRUCTURE
Bergen Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C008523610; Proceedings of the Thayer County Commissioners, 1888-1925, located in Thayer County Courthouse, Hebron, Nebraska; Bridge Reports, 8 August-1 November 1906, 1 January-1 April 1913, located in box marked "Reports of Bridge Work," located in vault in County Clerk's Office, Thayer County Courthouse; field inspection by Demian Hess, 22 July 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Big Sandy Creek Bridge
NDOR: C008532915

THAY09

DATE(S) OF CONSTRUCTION
1912

LOCATION
county road over Big Sandy Creek; S16/17, T3N, R2W
1.4 miles south of Belvidere; Thayer County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 26)

CONDITION
good

OWNER
Thayer County

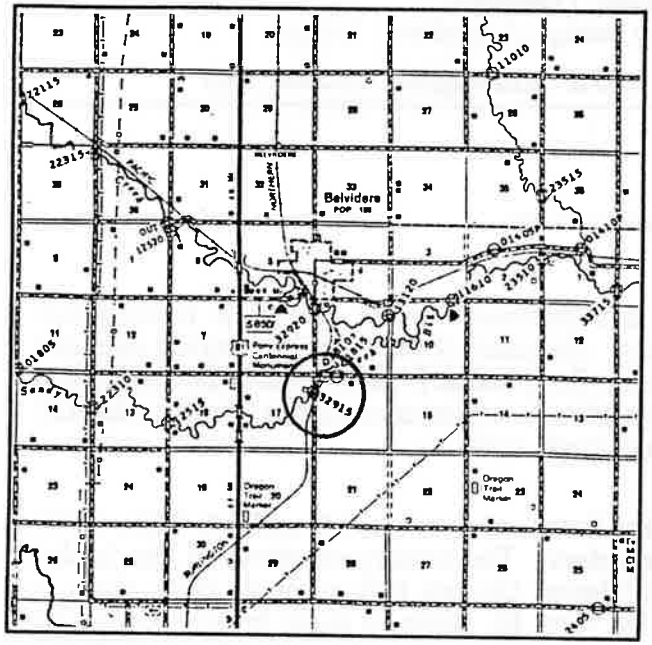
span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt half-hip pony truss
span length:	60.0'	substructure:	concrete-filled steel cylinder abutments
total length:	61.0'	floor/decking:	steel plate deck over I-beam stringers
roadway wdt.:	15.7'	other features:	upper chord: 2 channels with cover plate and battens; lower chord: 2 rectangular-section eyebars; vertical: 4 angles with lacing; diagonal: 2 rectangular-section eyebars; counter: circular-section eyebar with turnbuckle; floor beam: I-beam field-bolted to hanger plates by means of riveted angles -hangers riveted to bottoms of verticals; bottom lateral: cross-braced circular-section eyerods; railing: angle rails

This small-scale structure carries a county road over Big Sandy Creek and is located on the line between Sections 16 and 17, T3N, R2W, Belvidere Precinct. The bridge is a single-span, pinned Pratt half-hip pony truss on steel cylinders. The county constructed the bridge in 1912 for a total cost of $1,726.05. The bridge's half-hip design indicates that, although Thayer County had adopted state plans in 1906, it continued to build such non-standard structures. The span was probably erected by John M. Dillie, a local bridge contractor who held all of the county's bridge contracts from 1902 to 1913. A large number of half-hip Pratt pony trusses of nearly identical design still stand in Thayer County, and all can probably be attributed to Dillie. It is not known where Dillie obtained his bridge plans.

This bridge is typical of many half-hip Pratt pony trusses constructed in Nebraska during the 1910s.

NAME(S) OF STRUCTURE
Big Sandy Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C008532915; Proceedings of the Thayer County Commissioners, 1888-1925, located in Thayer County Courthouse, Hebron, Nebraska; Bridge Contracts, 1893-1920, located in drawer marked "Bonds and Contracts, Bridgework," in the vault in the County Clerk's Office, Thayer County Courthouse; Bridge Report, 1 September 1912-1 January 1913, located in box marked "Reports of Bridge Work," in vault in County Clerk's Office, Thayer County Courthouse; field inspection by Demian Hess, 22 July 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Spring Creek Bridge
NDOR: S136 12738

THAY10

DATE(S) OF CONSTRUCTION
1941

LOCATION
U.S. Highway 136 over Spring Creek; S12/13, T2N, R3W
1.8 miles miles southwest of Hebron; Thayer County, Nebraska

USE (ORIGINAL / CURRENT)
highway bridge / highway bridge

RATING NRHP non-eligible (score: 25)

CONDITION
good

OWNER
State of Nebraska

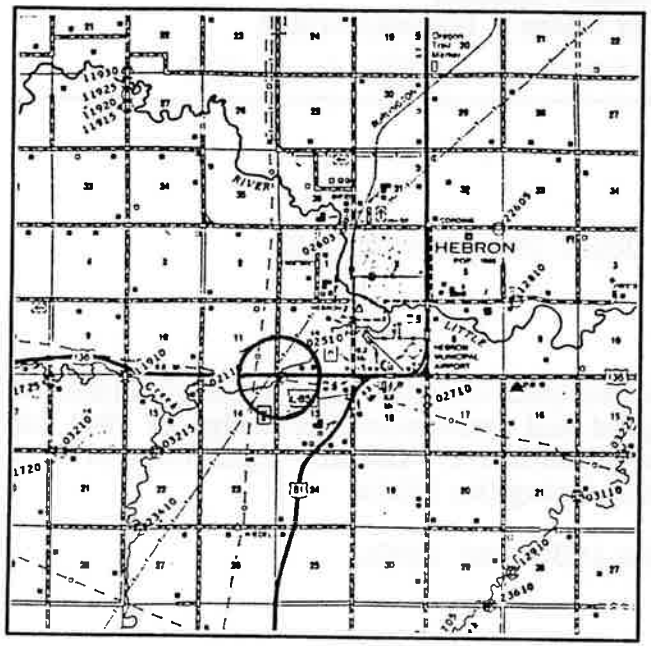
span number:	5	superstructure:	concrete rigid frame
span length:	32.0'	substructure:	concrete abutments and piers with flared, sloped concrete wingwalls
total length:	148.0'	floor/decking:	concrete slab
roadway wdt.:	26.0'	other features:	angle rails

Located on U.S. Highway 136 over Spring Creek six miles east of Deshler, this bridge is a five-span, concrete rigid frame structure. It appears to be unaltered and has a high degree of integrity. The State of Nebraska designed and constructed the bridge in 1941 for $13,712.68. The Roberts Construction Company of Lincoln, Nebraska, served as the general contractor. The first rigid frame bridges in the country were built during the 1920s, and the design was frequently used in Nebraska during the 1930s.

This structure is entirely typical of concrete rigid frame construction in Nebraska during the 1930s and 1940s.

NAME(S) OF STRUCTURE
Spring Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number S136 12738; Department of Roads and Irrigation, Twenty-Fourth Biennial Report, 1941-1942, pp. 107, 115; State of Nebraska, "148' Multiple Span Concrete Slab Bridge, Rigid Frame Type," 24 April 1941, plan number 164-A(2)-1, located in Bridge Division, Nebraska Department of Roads; Shop Plan Number 9320, dated 1941, located in Bridge Division, Nebraska Department of Roads; field inspection by Demian Hess, 22 July 1989.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: none

THAY11

DATE(S) OF CONSTRUCTION
ca.1905-15

LOCATION
county road over stream; S34, T3N, R1W/S3, T2N, R1W
2 miles north of Gilead; Thayer County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 30)

CONDITION
good

OWNER
Thayer County

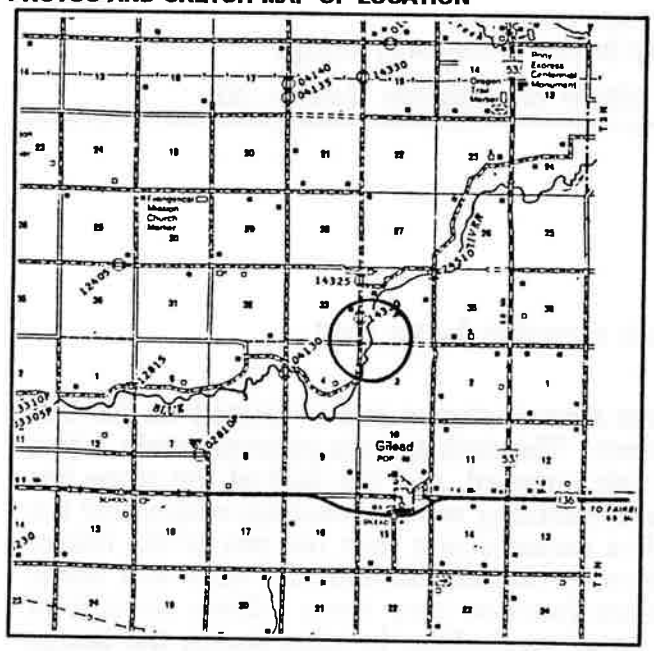
span number:	1	superstructure:	semi-coursed, fieldstone arch
span length:	approx. 10'	substructure:	stone
total length:	approx. 25'	floor/decking:	gravel over earth fill
roadway wdt.:	approx. 18'	other features:	welded face-to-face channels clamped to each elevation by tie rods

This single-span, semi-coursed field stone arch bridge carries an unimproved county road over a small stream and is located on the line between Section 34, T3N, R1W, Alexandria Precinct, and Section 3, T2N, R1W, Gilead Precinct. The arch springs approximately 3 feet above grade and has a span of approximately 10 feet. At the spring point, the abutments flair outward, and the face of the stone has been bushhammered. Other than this minor detailing, the bridge is unornamented. Fieldstone retaining walls extend approximately ten feet on either end of the bridge and hold the roadway fill in place. The stone in the walls is a darker shade than the rest of the bridge and appear to be a later addition. Welded box sections are clamped to each elevation by tie rods running beneath the vault and under the roadway fill. The clamps do not appear to be bracing the bridge, and it is unclear what function they serve. Given its lack of ornamentation, the bridge was probably not built as a Depression Era work relief program. Based on findings in other states, the bridge was most likely constructed between 1905 and 1915 as part of the so-called "Good Roads Movement." Unfortunately, county records make no reference to stone bridge construction. The bridge appears to have good integrity.

The bridge is a well-preserved and relatively rare example of "Good Roads" era stone arch bridge construction in Nebraska. Its lack of documentation, however, limited its interpretive value and diminishes its significance.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Demian Hess, interview with Alan Dill, Thayer County Highway Superintendent, 2 May 1990; Proceedings of the Thayer County Commissioners, 1888-1925, located in Thayer County Courthouse, Hebron, Nebraska; field inspection by Demian Hess, 2 May 1990.

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Rattlesnake Creek Bridge
NDOR: C008700510

THUR01

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county highway over Rattlesnake Creek; S19/24, T25N, R5E
4.0 miles northwest of Pender; Thurston County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 29)

CONDITION
good

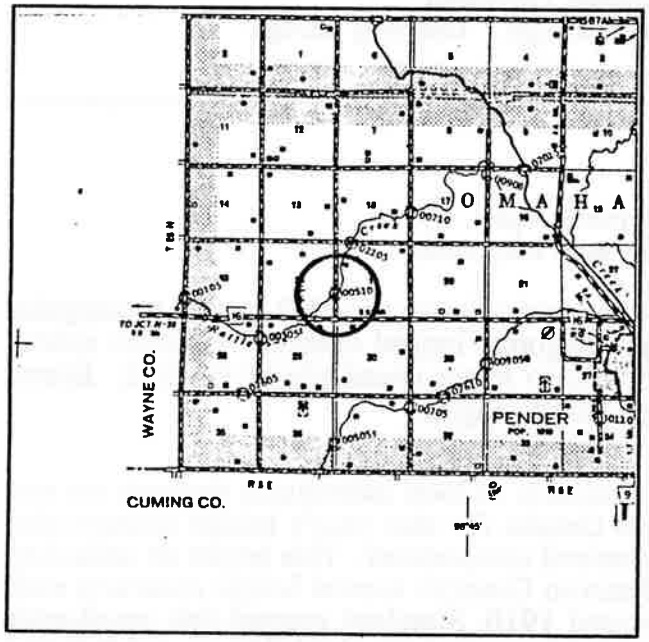
OWNER
Thurston County

span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt half-hip pony truss
span length:	50.0'	substructure:	steel pile bent abutments with timber back- and wingwalls
total length:	50.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	19.6'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars; vertical: paired angles with lacing; diagonal: looped eyebars; counter: eyerod with turnbuckle; floor beam: I-beam, U-bolted to lower chord pin at vertical; lateral bracing: round rod with threaded ends; guardrail: angles

Building primarily modest timber structures, Thurston County awarded bridge construction contracts to local individuals through the end of the 19th century. In 1902 the county contracted with the Standard Bridge Company of Omaha for that year's bridge construction work, based upon unit-price bids for trusses, beams and individual superstructural and substructural components. This began an unbroken string of annual bridge contracts that extended at least through 1917. Standard received Thurston County's annual bridge contracts each year, despite bidding against several other firms prominent in the state and the region. Around 1910, Standard erected this small-scale truss over Rattlesnake Creek four miles northwest of Pender. Configured as a pinned Pratt half-hip pony truss, the bridge was fabricated from a Standard Bridge standard design. The Rattlesnake Creek Bridge has carried traffic to the present in essentially unaltered condition.

NAME(S) OF STRUCTURE
Rattlesnake Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C008700510; field inspection by Fred Quivik, 18 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
North Omaha Creek Bridge
NDOR: C008700620

THUR02

DATE(S) OF CONSTRUCTION
ca.1905

LOCATION
township road over North Omaha Creek; S5/8, T26N, R7E
6.0 miles northeast of Thurston; Thurston County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 43)

CONDITION
good

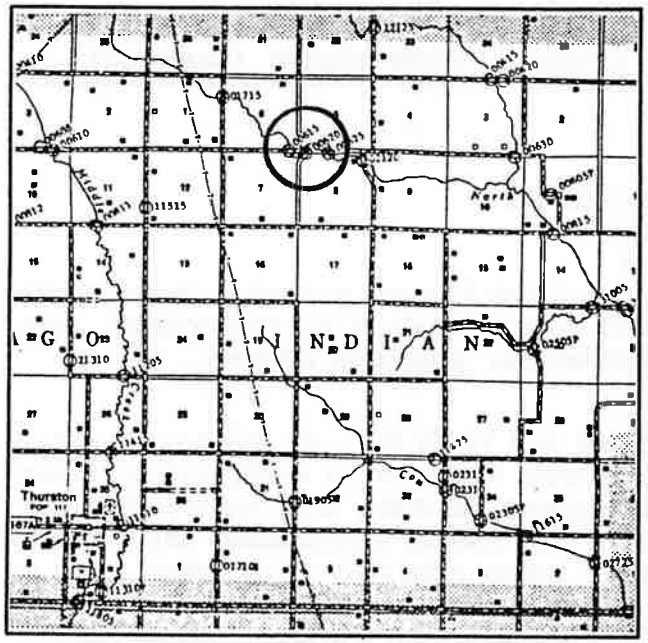
OWNER
Thurston County

span number:	1	superstructure:	steel, 2-panel, pin-connected Pratt truss leg bedstead
span length:	60.0'	substructure:	steel pile bent abutments with timber backwalls
total length:	61.0'	floor/decking:	timber deck over transverse I-beam stringers
roadway wdt.:	15.5'	other features:	end post: H-beam; upper chord: H-beam; lower chord: I-beam; vertical: 2 channels with lacing; diagonal: 2 rectangular eyebars (with threaded ends at hip connection); floor beam: I-beam; lateral bracing: angle with turnbuckle; guardrail: lattice

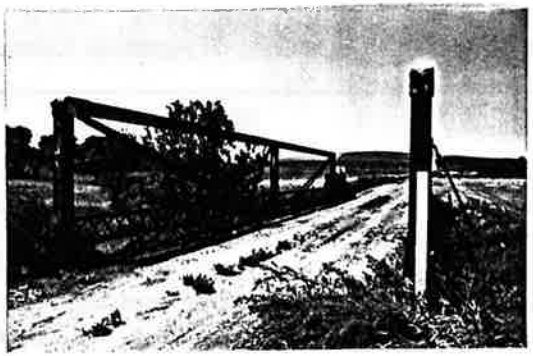
The North Omaha Creek Bridge carries a secondary county road on the line between sections 5/8 T26N R7E, six miles northeast of Thurston. No specific reference to the span was found in county records, but based on its truss leg bedstead configuration, it was probably built about 1905. Although numerous truss leg bedstead bridges were erected throughout the state, most featured industry-standard floor systems with longitudinal stringers. This bridge has transverse I-beam stringers that rest on a continuous angle section and are bolted and riveted to the webs of deeper longitudinal I-beam stringers. I-beam floor beams exist only at the panel point to support the struts. Robert Zale Drake claims credit for inventing the transverse joist bridge and the multiple punch used in its manufacture. Drake's firm, the Standard Bridge Company held the annual contracts to built Thurston County's bridges from 1902 until 1914. This modest crossing is likely among the earlier Thurston County bridges erected by the Omaha-based firm. Its transverse joist floor system distinguishes it as a peculiar - and somewhat structurally redundant - hybrid of truss and beam construction.

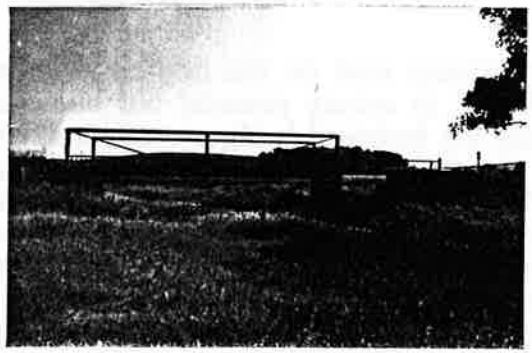
NAME(S) OF STRUCTURE
North Omaha Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C008700620; Sara Mullin Baldwin and Robert Baldwin, eds., **Biographical Sketches of Nebraska Men and Women of Achievement** (Hebron, Nebraska: The Baldwin Co., 1932), pages 343-344; field inspection by Fred Quivik, 19 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
North Omaha Creek Bridge
NDOR: C008700625

THUR03

DATE(S) OF CONSTRUCTION
ca.1905

LOCATION
township road over North Omaha Creek; S5/8, T26N, R7E
6.0 miles northeast of Thurston; Thurston County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 29)

CONDITION
good

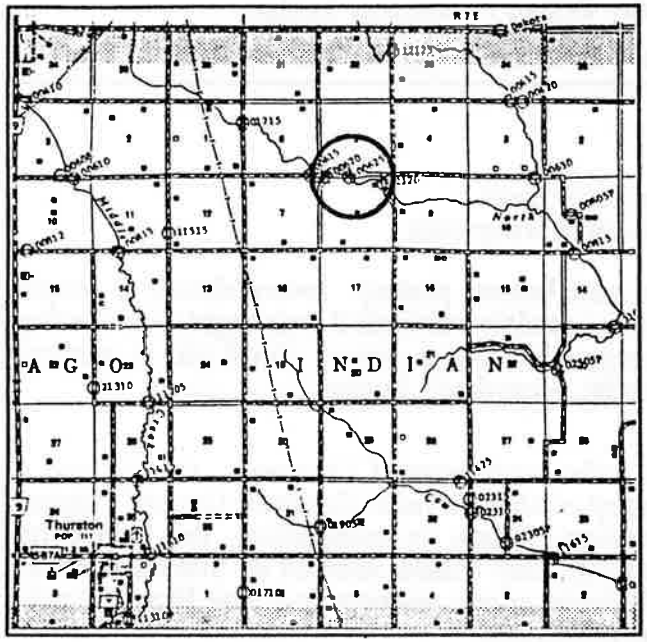
OWNER
Thurston County

span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt half-hip pony truss
span length:	50.0'	substructure:	steel pile bent abutments with timber back- and wingwalls
total length:	50.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	19.9'	other features:	upper chord: 2 channels with cover plate and batten plates; lower chord; 2 looped eyebars (outer panels), punched eyebars (inner panels); vertical: 2 pair angles with lacing; diagonal: looped eyebars; floor beam: I-beam, U-bolted to lower chord pin at vertical; lateral bracing: round rod with threaded ends; guardrail: lattice

This small-scale truss carries a gravel-surfaced county road across North Omaha Creek, six miles northeast of Thurston. Configured as a pinned Pratt half-hip pony truss, the bridge was built ca.1910 The Standard Bridge Company of Omaha held Thurston County's annual bridge contracts between 1902 and 1917, and is likely responsible for erecting this structure. Since its completion, the bridge has functioned in place in essentially unaltered condition. It is typical of the hundreds of such half-hip pony trusses erected by Standard Bridge from a standard design in the early 1900s. Located on a secondary county road over a relatively minor watercourse, the North Omaha Creek Bridge has played only a marginal role in the development of eastern Nebraska transportation.

NAME(S) OF STRUCTURE
North Omaha Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C008700625; field inspection by Fred Quivik, 19 July 1989

INVENTORIED BY	AFFILIATION	DATE
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Logan Creek Bridge
NDOR: C008700805P

THUR04

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county highway over Logan Creek; SW1/4, S14, T26N, R5E
7.0 miles northwest of Thurston; Thurston County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 29)

CONDITION
good

OWNER
Thurston County

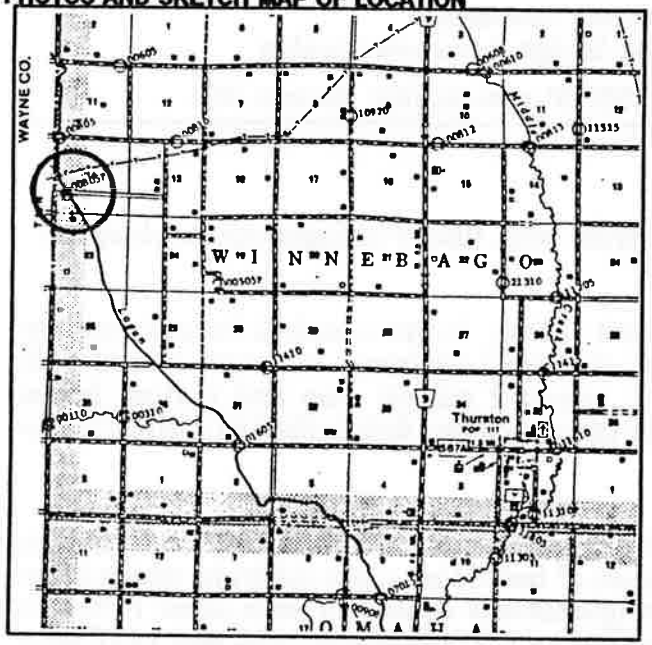
span number: 1
span length: 120.0'
total length: 184.0'
roadway wdt.: 15.4'

superstructure: steel, 7-panel, pin-connected Pratt through truss with timber stringer approach spans
substructure: steel pile bent abutments and piers
floor/decking: timber deck over I-beam stringers
other features: upper chord: 2 channels with cover plate and lacing; lower chord: 2 looped eyebars; vertical: 2 channels with lacing; diagonal: 2 looped eyebars; counter: eyerod with turnbuckle, square eyerods at center panel; strut: 2 angles; top and bottom lateral bracing: round rod with threaded ends; floor beam: I-beam, field bolted to vertical below lower chord; guardrail: 2 channels

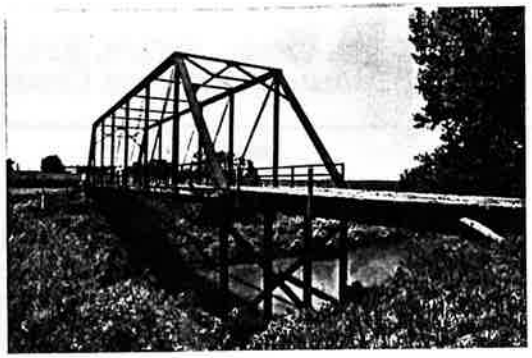
Carrying a gravel surfaced county road over Logan Creek, this medium-span truss is located seven miles northwest of Thurston. County records only infrequently mention the construction of specific bridges, making the identification of individual spans difficult, which is the case with the Logan Creek Bridge. Built as seven-panel, pinned Pratt through truss, its configuration is consistent with other Nebraska bridges documented to have been built circa 1910. Thurston County's annual bridge construction contracts between 1902 and 1917 were held by the Standard Bridge Company of Omaha. During this period, Standard Bridge erected numerous short-span pony trusses, but for this longer crossing, instead erected a through truss. Since its completion, the bridge has carried vehicular traffic largely as originally built. With its construction history largely undocumented, the Logan Creek Bridge is one of the less noteworthy of the many pinned vehicular through trusses remaining in Nebraska.

NAME(S) OF STRUCTURE
Logan Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C008700805P; field inspection by Fred Quivik, 19 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge THUR05
NDOR: C008701305P

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county highway over unnamed stream; Center N1/2, S35, T25N, R6E
0.5 mile southeast of Pender; Thurston County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 29)

CONDITION
good

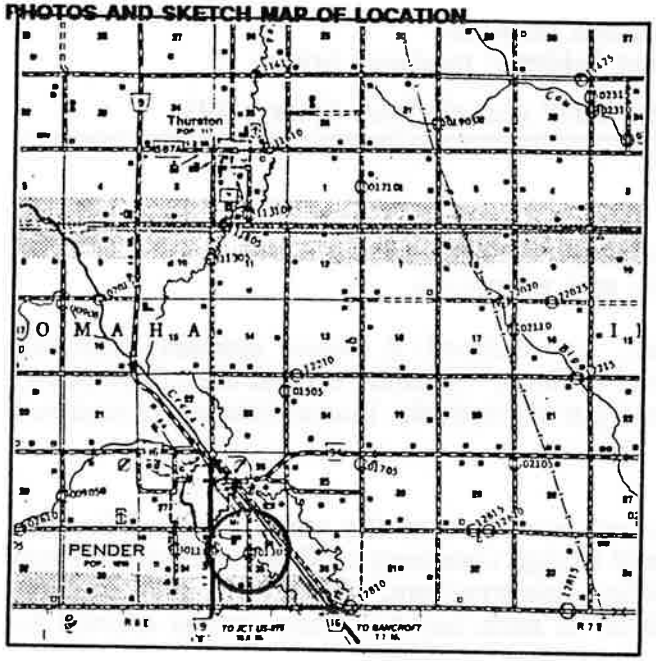
OWNER
Thurston County

span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt half-hip pony truss
span length:	50.0'	substructure:	steel pile bent abutments with timber back- and wingwalls
total length:	50.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.7'	other features:	upper chord: 2 channels with batten plates; lower chord: 2 looped eyebars; vertical: 2 pair angles with lacing; diagonal: 2 looped eyebars; counter: eyerod with turnbuckle; floor beam: I-beam, U-bolted to lower chord pin at vertical; lateral bracing: round rod with threaded ends; guardrail: lattice

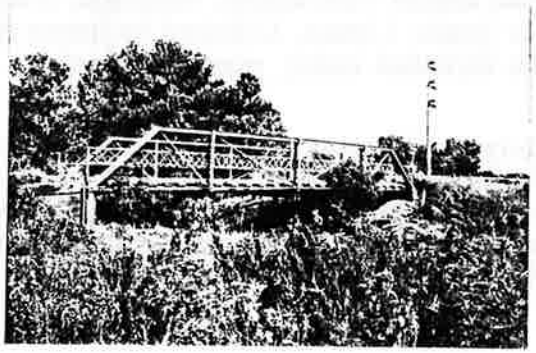
This small-scale truss carries a gravel-surfaced county road across an intermittent stream just southeast of the small town of Pender. Configured as a pinned Pratt half-hip pony truss, the bridge was built ca.1910 The Standard Bridge Company of Omaha held Thurston County's annual bridge contracts between 1902 and 1917, and is likely responsible for erecting this structure. Since its completion, the bridge has functioned in place in essentially unaltered condition. It is typical of the hundreds of such half-hip pony trusses erected by Standard Bridge from a standard design in the early 1900s.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C008701305P; field inspection by Fred Quivik, 19 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
North Omaha Creek Bridge THUR06
NDOR: C008701715

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
Collector Route 17C over North Omaha Creek; S1/6, T26N, R6/7E
6.0 miles northeast of Thurston; Thurston County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 32)

CONDITION
good

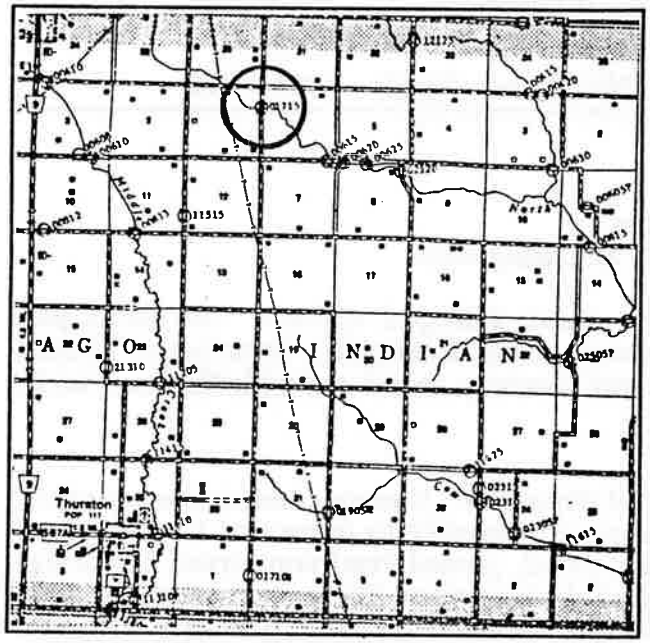
OWNER
Thurston County

span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt pony truss
span length:	60.0'	substructure:	steel pile bent abutments with timber back- and wingwalls
total length:	62.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	14.1'	other features:	upper chord: 2 channels with lacing; lower chord: 2 looped eyebars; vertical: 2 pair angles with battens; diagonal: 2 looped eyebars; sway: steel plate; floor beam: I-beam, U-bolted to vertical below lower chord; lateral bracing: round rod with threaded ends; guard rail: 2 angles

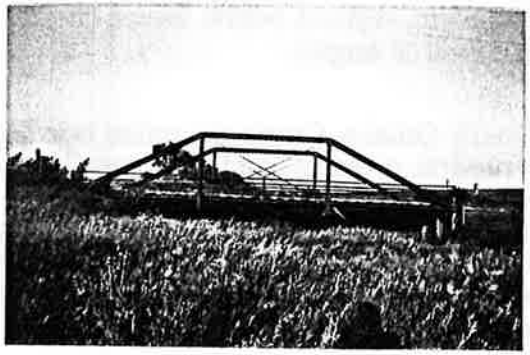
This bridge carries a secondary county road over North Omaha Creek six miles northeast of Thurston. County Commissioners rarely recorded their discussions of individual bridge construction projects, and as a result, it is often not possible to document the history of individual structures. Such is the case with this modest span. Designed and erected as a three-panel, pinned Pratt pony truss, the bridge is analogous with other Nebraska bridges documented to have been built from state standard designs circa 1915. Between 1902 and 1917, the Omaha-based Standard Bridge Company held Thurston County's annual contract for the construction of steel bridges. Standard Bridge is likely responsible for the erection of this crossing. The hip vertical on the bridge's northeast corner is not original, having been welded into place. The structure, otherwise, has retained its physical integrity.

NAME(S) OF STRUCTURE
North Omaha Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C008701715; field inspection by Fred Quivik, 19 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Logan Creek Bridge
NDOR: C008702015

THUR07

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
Township road over Logan Creek; S9/16, T25N, R6E
2.5 miles southwest of Thurston; Thurston County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 29)

CONDITION
good

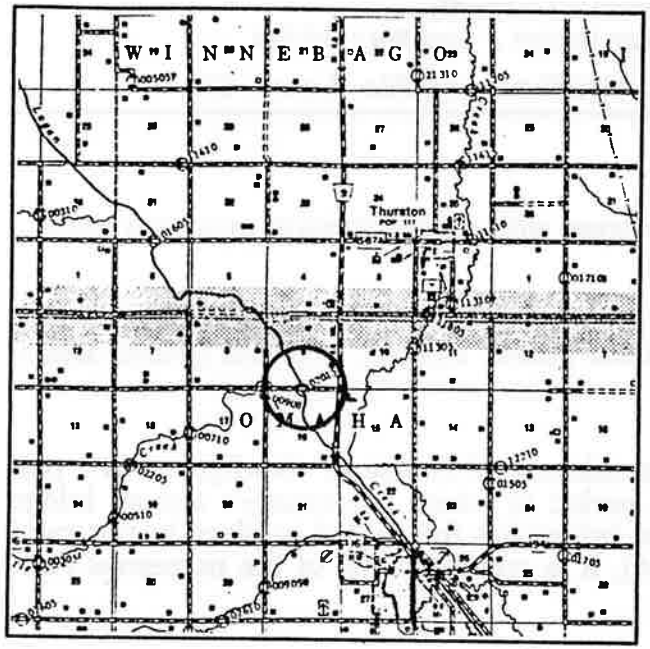
OWNER
Thurston County

span number:	1	superstructure:	steel, 7-panel, pin-connected Pratt through truss with timber stringer approach spans
span length:	120.0'	substructure:	steel pile bent piers; timber abutments
total length:	181.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.6'	other features:	upper chord: 2 channels with lacing; lower chord: looped eyebars; diagonal: looped eyebars; counter: rods; strut: 2 angles; floor beam: I-beam; top and bottom lateral bracing: rods; guardrail: 2 channels

This medium-scale truss carries an unpaved county road across Logan Creek 2-1/2 miles southwest of Thurston. Configured as a pin-connected Pratt through truss, the bridge appears to have been built ca.1915, during a period in which the county's annual bridge contracts were held by the Standard Bridge Company of Omaha. Since its completion, the bridge has functioned in place in this rural Thurston County location. Virtually identical to another span over Logan Creek (THUR04), it is representative of the numerous Pratt through trusses erected throughout Nebraska in the 1910s and 1920s.

NAME(S) OF STRUCTURE
Logan Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C008702015; field inspection by Fred Quivik, 19 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Rattlesnake Creek Bridge THUR08
NDOR: C008702205

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county highway over Rattlesnake Creek; S18/19, T25N, R6E
4.0 miles southeast of Pender; Thurston County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 29)

CONDITION
good

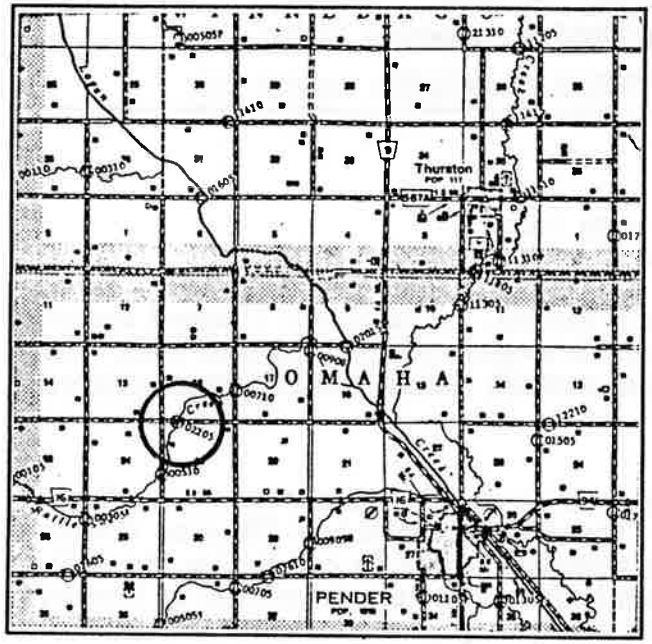
OWNER
Thurston County

span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt half-hip pony truss
span length:	50.0'	substructure:	steel pile bent abutments with timber back- and wingwalls
total length:	50.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	16.0'	other features:	upper chord: 2 channels with cover plate and battens; lower chord: 2 looped eyebars; vertical: 2 pair angles with lacing; diagonal: 2 looped eyebars; counter: rods; floor beam: I-beam, U-bolted to lower chord pin at vertical; lateral bracing: round rod with threaded ends; guardrail: lattice

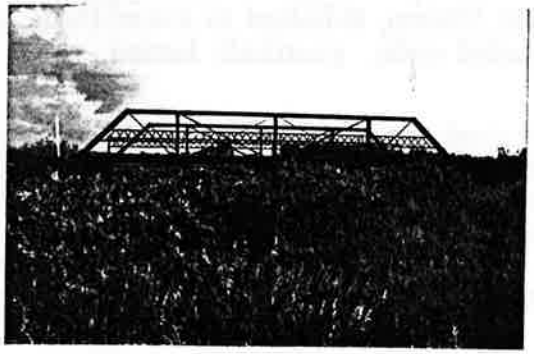
This small-scale truss carries a gravel-surfaced county road over Rattlesnake Creek just southeast of the small town of Pender. Configured as a pinned Pratt half-hip pony truss, the bridge was built ca.1910 The Standard Bridge Company of Omaha held Thurston County's annual bridge contracts between 1902 and 1917, and is likely responsible for erecting this structure. Since its completion, the bridge has functioned in place in essentially unaltered condition. It is typical of the hundreds of such half-hip pony trusses erected by Standard Bridge from a standard design in the early 1900s. Located on a secondary county road over a relatively minor watercourse, the North Omaha Creek Bridge has played only a marginal role in the development of eastern Nebraska transportation.

NAME(S) OF STRUCTURE
Rattlesnake Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C008702205; field inspection by Fred Quivik, 18 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
North Omaha Creek Bridge THUR09
NDOR: C008703105P

DATE(S) OF CONSTRUCTION
ca.1905

LOCATION
township road over North Omaha Creek; Center S1/2, S28, T26N, R8E
3.0 miles southwest of Winnebago; Thurston County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 45)

CONDITION
good

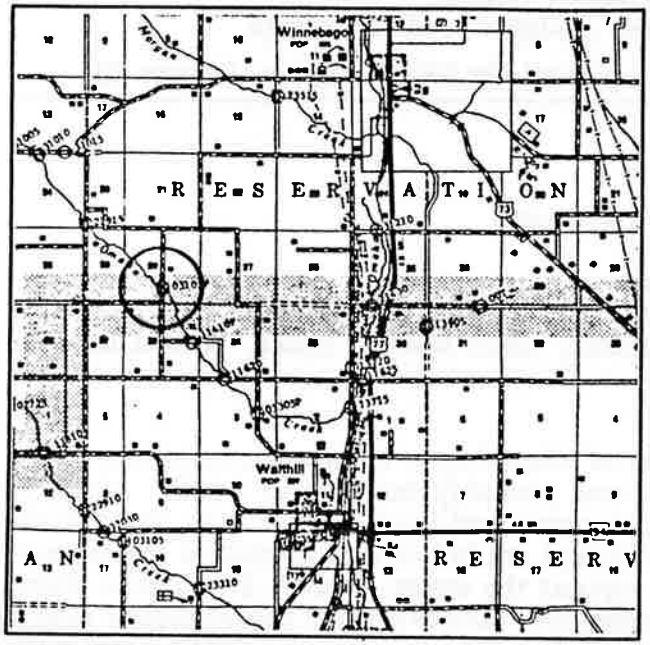
OWNER
Thurston County

span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt truss leg bedstead
span length:	80.0'	substructure:	steel piles with diagonal bracing
total length:	80.0'	floor/decking:	timber deck over transverse I-beam stringers
roadway wdt.:	15.4'	other features:	end post: H-beam; upper chord: H-beam; lower chord: I-beam with angle carrying stringers; diagonal: bar, square rods at center; floor beam: I-beam; lateral bracing: angles; guardrail: lattice

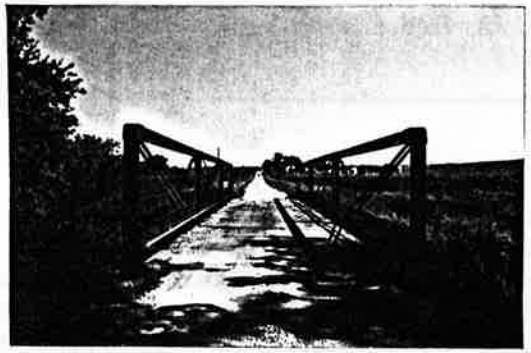
The North Omaha Creek Bridge carries a secondary county road some three miles southwest of Winnebago. No specific reference to the span was found in county records, but based on its truss leg bedstead configuration, it was probably built about 1905. Although numerous truss leg bedstead bridges were erected throughout the state, most featured industry-standard floor systems with longitudinal stringers. This bridge has transverse I-beam stringers that rest on a continuous angle section and are bolted and riveted to the webs of deeper longitudinal I-beam stringers. I-beam floor beams exist only at the panel point to support the struts. Robert Zale Drake claims credit for inventing the transverse joist bridge and the multiple punch used in its manufacture. Drake's firm, the Standard Bridge Company held the annual contracts to built Thurston County's bridges from 1902 until 1914. This modest crossing is likely among the earlier Thurston County bridges erected by the Omaha-based firm. Its transverse joist floor system distinguishes it as a peculiar - and somewhat structurally redundant - hybrid of truss and beam construction.

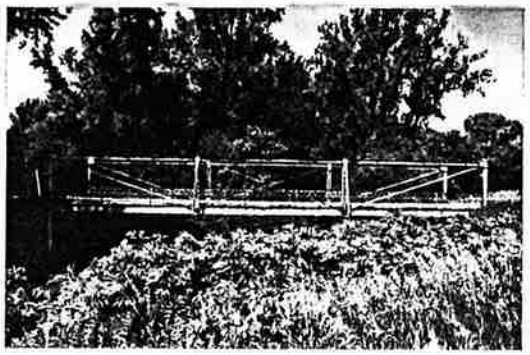
NAME(S) OF STRUCTURE
North Omaha Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C008703105P; Sara Mullin Baldwin and Robert Baldwin, eds., **Biographical Sketches of Nebraska Men and Women of Achievement** (Hebron, Nebraska: The Baldwin Co., 1932), pages 343-344; field inspection by Fred Quivik, 19 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
South Omaha Creek Bridge THUR10
NDOR: C008710425

DATE(S) OF CONSTRUCTION
ca.1925

LOCATION
county highway over South Omaha Creek; S35/2, T27/26N, R8E
1.7 miles north of Winnebago; Thurston County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 31)

CONDITION
good

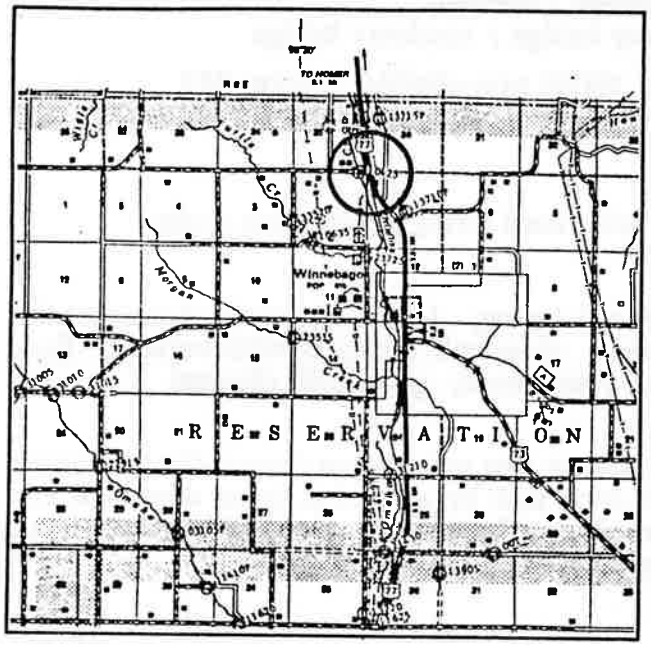
OWNER
Thurston County

span number:	1	superstructure:	steel, 5-panel, rigid Camelback pony truss with steel stringer approach spans
span length:	100.0'	substructure:	steel pile bent piers; timber pile abutments
total length:	169.0'	floor/decking:	concrete deck over I-beam stringers
roadway wdt.:	19.8'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 channels with battens; vertical: 2 pair angles with battens; diagonal: 2 angles with battens; floor beam: I-beam; lateral bracing: square and round rods; guardrail: channel

This medium-span pony truss carries a gravel-surfaced county road over South Omaha Creek almost two miles some three miles southwest of Winnebago. The structure is composed of a single Camelback pony truss, flanked on each side by a steel stringer approach and supported by steel pile bent piers. No specific reference to the span was found in county records, but based on its design and dimensions, this truss appears to have been erected ca.1925. It is a typical example of a relatively common Pratt truss subtype.

NAME(S) OF STRUCTURE
South Omaha Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C008710425; field inspection by Fred Quivik, 19 July 1989.

INVENTORIED BY	AFFILIATION	DATE
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
South Omaha Creek Bridge THUR11
NDOR: C008710810P

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
township road over South Omaha Creek; Center S13, T26N, R8E
0.5 mile south of Winnebago; Thurston County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 32)

CONDITION
good

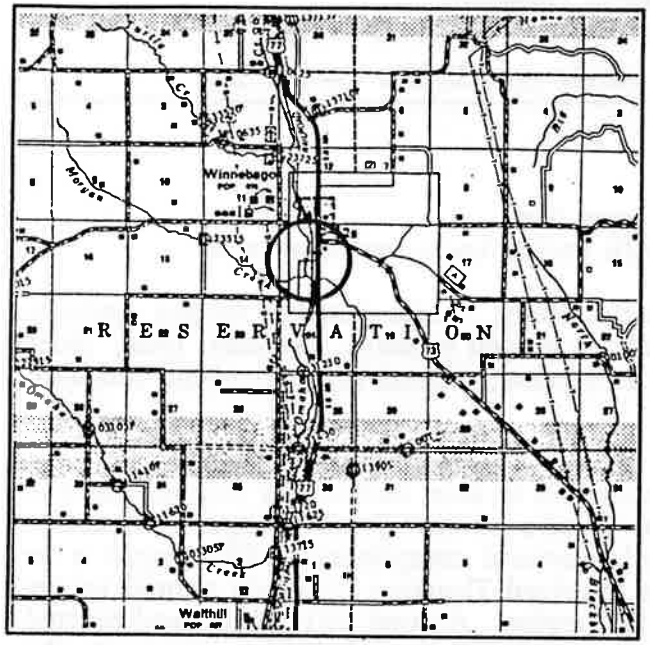
OWNER
Thurston County

span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt half-hip pony truss
span length:	60.0'	substructure:	steel pile bent piers; steel pile abutments with timber back- and sidewalls
total length:	113.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.7'	other features:	upper chord: 2 channels with cover plate and battens; lower chord: 2 looped eyebars; vertical: 2 pair angles with lacing; diagonal: 2 looped eyebars; counter: rods; floor beam: I-beam, U-bolted to lower chord pin at vertical; lateral bracing: round rod with threaded ends; guardrail: lattice

Building primarily modest timber structures, Thurston County awarded bridge construction contracts to local individuals through the end of the 19th century. In 1902 the county contracted with the Standard Bridge Company of Omaha for that year's bridge construction work, based upon unit-price bids for trusses, beams and individual superstructural and substructural components. This began a an unbroken string of annual bridge contracts that extended at least through 1917. Standard received Thurston County's annual bridge contracts each year, despite bidding against several other firms prominent in the state and the region. Around 1910, Standard erected this small-scale truss over South Omaha Creek a half mile south of Winnebago. Configured as a pinned Pratt half-hip pony truss, the bridge was fabricated from a Standard Bridge standard design. It fits well within the technological trends for the period. The South Omaha Creek Bridge has carried traffic to the present in essentially unaltered condition.

NAME(S) OF STRUCTURE
South Omaha Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C008710810P; field inspection by Fred Quivik, 19 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Middle Creek Bridge
NDOR: C008711415

THUR12

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county highway over Middle Creek; S26/35, T26N, R6E
1.0 mile north of Thurston; Thurston County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 32)

CONDITION
good

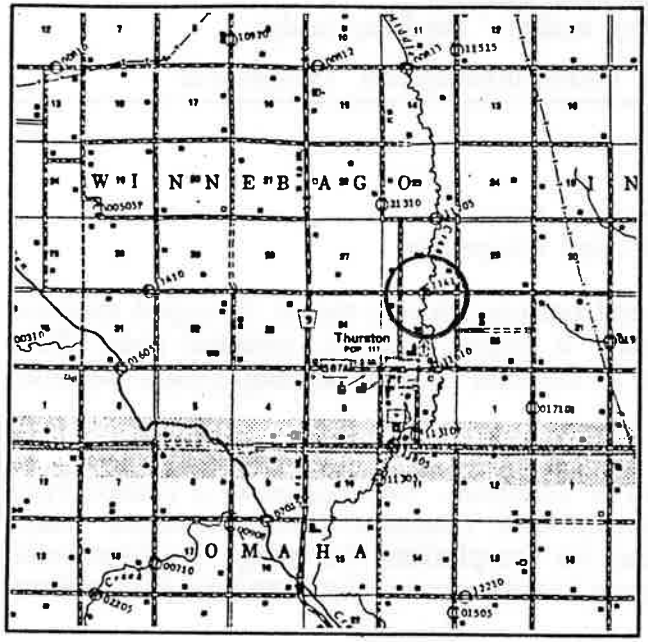
OWNER
Thurston County

span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt half-hip pony truss
span length:	60.0'	substructure:	steel pile bent abutments with timber back- and wingwalls
total length:	61.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.7'	other features:	upper chord: 2 channels with cover plate and battens; lower chord: 2 looped eyebars; vertical: 2 pair angles with lacing; diagonal: 2 looped eyebars; counter: rods; floor beam: I-beam, U-bolted to lower chord pin at vertical; lateral bracing: round rod with threaded ends; guardrail: lattice

This small-scale truss carries a gravel-surfaced county road over Middle Creek a mile north of Thurston. Configured as a pinned Pratt half-hip pony truss, the bridge was built ca.1910 The Standard Bridge Company of Omaha held Thurston County's annual bridge contracts between 1902 and 1917, and is likely responsible for erecting this structure. Since its completion, the bridge has functioned in place in essentially unaltered condition. It is typical of the hundreds of such half-hip pony trusses erected by Standard Bridge from a standard design in the early 1900s.

NAME(S) OF STRUCTURE
Middle Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C008711415; field inspection by Fred Quivik, 18 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Cow Creek Bridge
NDOR: C008711615

THUR13

DATE(S) OF CONSTRUCTION
ca.1905

LOCATION
county road over Cow Creek; S2/35, T25/26N, R7E
5.5 miles east of Thurston; Thurston County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 38)

CONDITION
poor

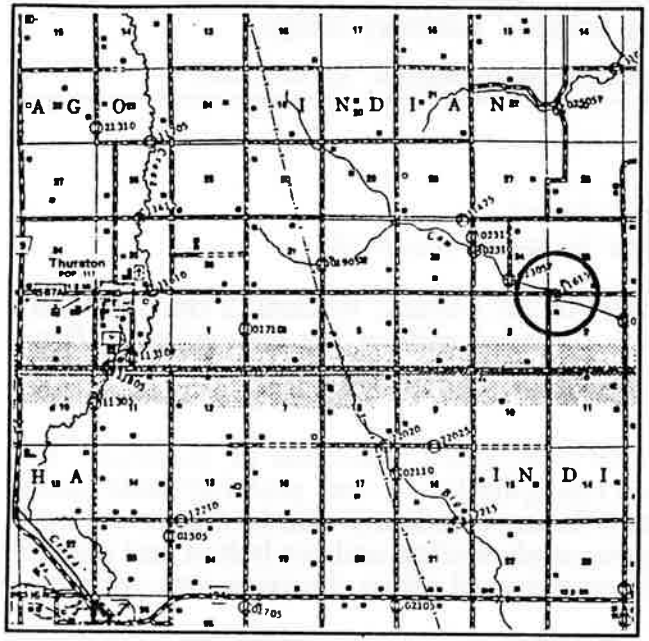
OWNER
Thurston County

span number:	1	superstructure:	steel, 2-panel, pin-connected Pratt truss leg bedstead
span length:	60.0'	substructure:	steel bent; I-beam pile abutments with timber back-and wingwalls
total length:	87.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	19.4'	other features:	end post: H-beam; upper chord: H-beam; lower chord: I-beam; vertical: 2 channels with lacing; diagonal: 2 rectangular eyebars (with threaded ends at hip connection); floor beam: I-beam; lateral bracing: angle with turnbuckle; guardrail: lattice

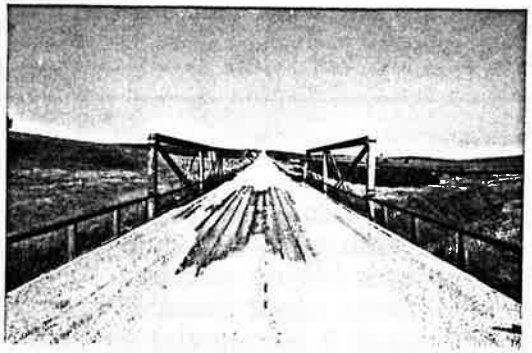
The Cow Creek Bridge carries a secondary county road on the line between sections 5/8 T26N R7E, 5-1/2 miles east of Thurston. No specific reference to the span was found in county records, but based on its truss leg bedstead configuration, it was probably built about 1905. Although numerous truss leg bedstead bridges were erected throughout the state, most featured industry-standard floor systems with longitudinal stringers. This bridge had transverse I-beam stringers that rest on a continuous angle section and are bolted and riveted to the webs of deeper longitudinal I-beam stringers. This unusual floor system has since been removed when the truss was widened, substantially compromising the bridge's structural integrity.

NAME(S) OF STRUCTURE
Cow Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C008711615; field inspection by Fred Quivik, 19 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Middle Creek Bridge
NDOR: C008711805

THUR14

DATE(S) OF CONSTRUCTION
1913

LOCATION
county highway over Middle Creek; S2/11, T25N, R6E
1.0 mile south of Thurston; Thurston County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 33)

CONDITION
good

OWNER
Thurston County

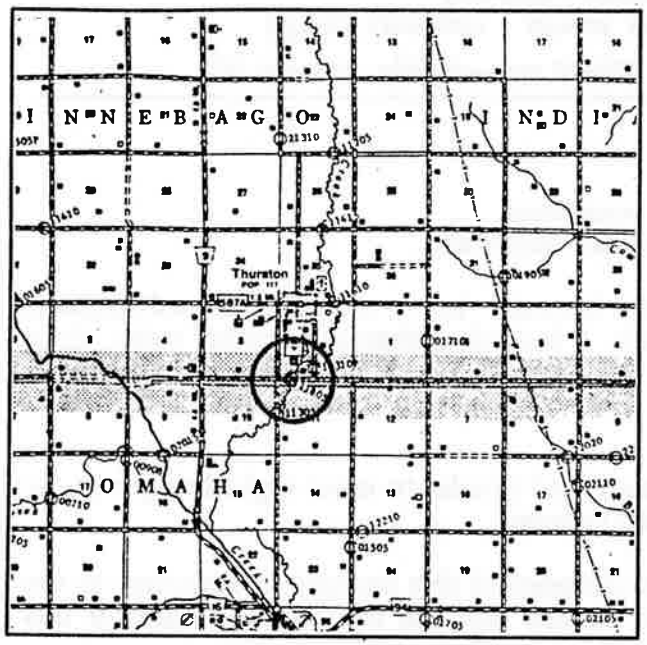
span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt half-hip pony truss
span length:	50.0'	substructure:	steel pile bent abutments with timber back- and wingwalls
total length:	50.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	19.7'	other features:	upper chord: 2 channels with cover plate and battens; lower chord: 2 looped eyebars; vertical: 2 pair angles with lacing; diagonal: 2 looped eyebars; counter: rods; floor beam: I-beam, U-bolted to lower chord pin at vertical; lateral bracing: round rod with threaded ends; guardrail: lattice

On June 11, 1913, the Thurston County Commissioners instructed the Standard Bridge Company of Omaha to erect eight bridges under the county's annual contract. This small-scale structure over Middle Creek was among those ordered.

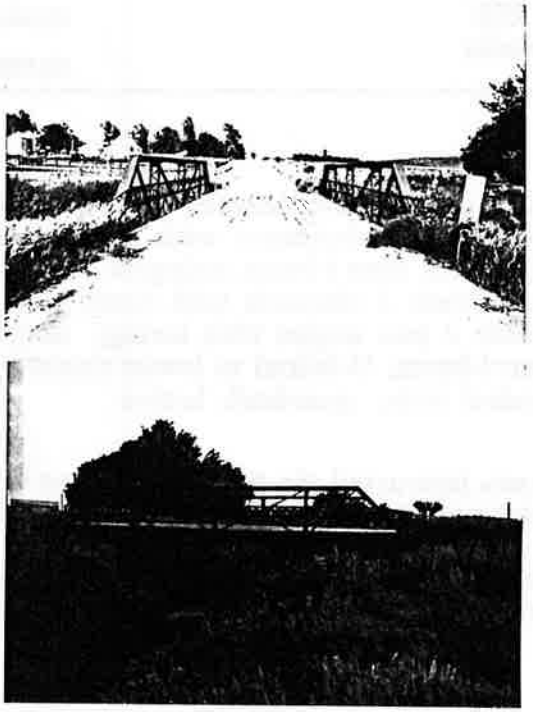
This bridge is typical of the many small structures built by the counties during the first two decades of this century in response to the public's demand for adequate transportation networks. Unlike many similar structures, the builder and the construction date for this bridge are documented.

NAME(S) OF STRUCTURE
Middle Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C008711805; Thurston County Commissioners Record, 11 June 1913, located at Thurston County Courthouse, Pender, Nebraska; field inspection by Fred Quivik, 18 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
South Omaha Creek Bridge THUR15
NDOR: C008722635

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county highway over South Omaha Creek; S26/35, T25N, R8E
2.7 miles south of Walthill; Thurston County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 29)

CONDITION
good

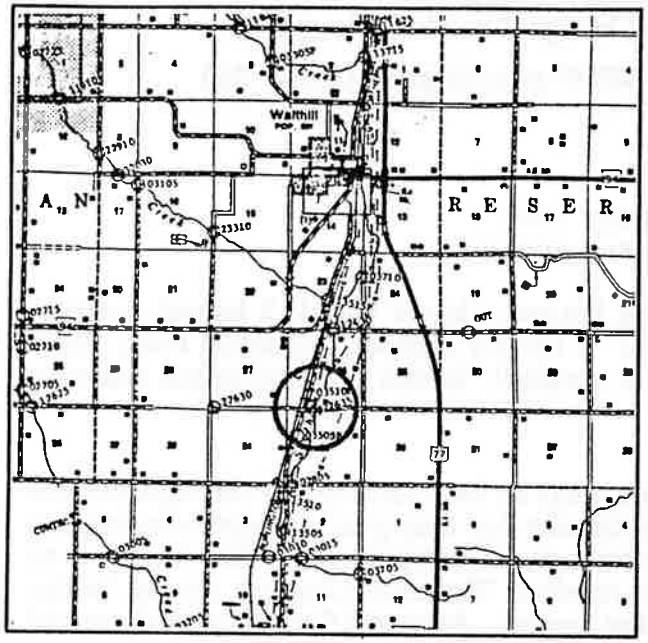
OWNER
Thurston County

span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt half-hip pony truss
span length:	50.0'	substructure:	steel pile bent abutments with timber back- and wingwalls
total length:	50.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	20.0'	other features:	upper chord: 2 channels with cover plate and battens; lower chord: 2 looped eyebars; vertical: 2 pair angles with lacing; diagonal: 2 looped eyebars; counter: rods; floor beam: I-beam, U-bolted to lower chord pin at vertical; lateral bracing: round rod with threaded ends; guardrail: lattice

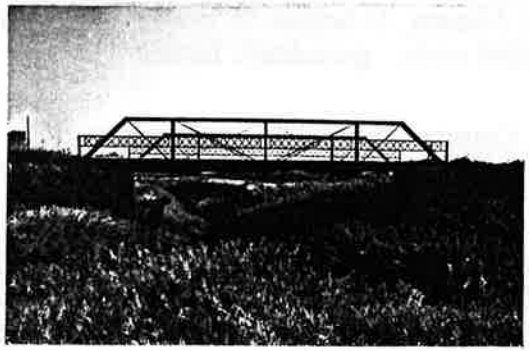
Building primarily modest timber structures, Thurston County awarded bridge construction contracts to local individuals through the end of the 19th century. In 1902 the county contracted with the Standard Bridge Company of Omaha for that year's bridge construction work, based upon unit-price bids for trusses, beams and individual superstructural and substructural components. This began a an unbroken string of annual bridge contracts that extended at least through 1917. Standard received Thurston County's annual bridge contracts each year, despite bidding against several other firms prominent in the state and the region. Around 1910, Standard erected this small-scale truss over South Omaha Creek south of Walthill. Configured as a pinned Pratt half-hip pony truss, the bridge was fabricated from a Standard Bridge standard design. It fits well within the technological trends for the period. The South Omaha Creek Bridge has carried traffic to the present in essentially unaltered condition.

NAME(S) OF STRUCTURE
South Omaha Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C008722635; field inspection by Fred Quivik, 19 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Cow Creek Bridge
NDOR: C008732030

THUR16

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county highway over Cow Creek; S26/35, T25N, R8E
2.2 miles west of Walthill; Thurston County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 29)

CONDITION
good

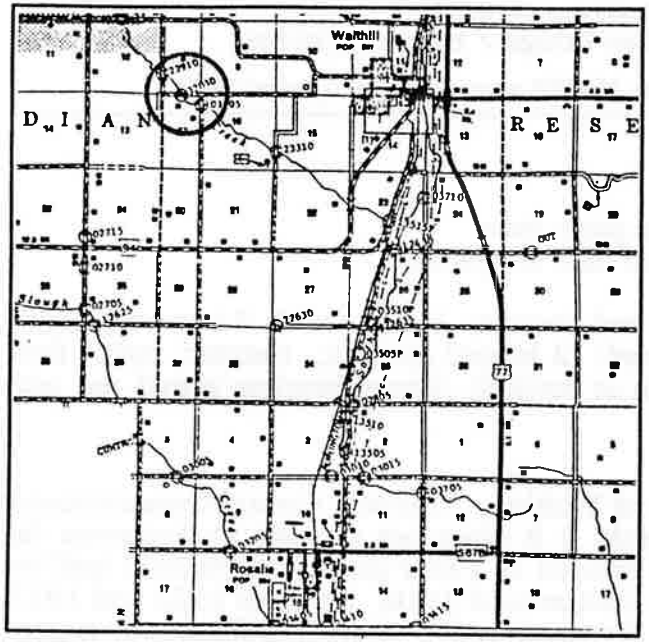
OWNER
Thurston County

span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt half-hip pony truss
span length:	58.0'	substructure:	steel pile bent abutments with timber back- and wingwalls
total length:	59.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	20.0'	other features:	upper chord: 2 channels with cover plate and battens; lower chord: 2 looped eyebars; vertical: 2 pair angles with lacing; diagonal: 2 looped eyebars; counter: rods; floor beam: I-beam, U-bolted to lower chord pin at vertical; lateral bracing: round rod with threaded ends; guardrail: lattice

This bridge carries a secondary county road across Cow Creek a little over two miles west of Walthill. Thurston County Commissioners seldom recorded their discussions of individual bridge construction projects, and as a result, it is often not possible to document the history of specific bridges. Such is the case with this small-scale structure. Designed and erected as a four-panel, pinned Pratt half-hip pony truss, the bridge is analogous with other Nebraska bridges documented to have been built around 1910. Between 1902 and 1917, the Omaha based Standard Bridge Company held Thurston County's annual contract for the construction of steel bridges, and erected numerous small-scale trusses. This Cow Creek bridge is characteristic of a Standard Bridge design, and was undoubtedly among those erected by the firm. Having endured only minor, maintenance-related alterations, the bridge has retained a large measure of its historical integrity.

NAME(S) OF STRUCTURE
Cow Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C008732030; field inspection by Fred Quivik, 19 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Lee Creek Bridge
NDOR: C008804405

VALL01

DATE(S) OF CONSTRUCTION
1915

LOCATION
county road over Lee Creek; S17/20, T17N, R16W
3.0 miles northwest of Arcadia; Valley County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 22)

CONDITION
fair

OWNER
Valley County

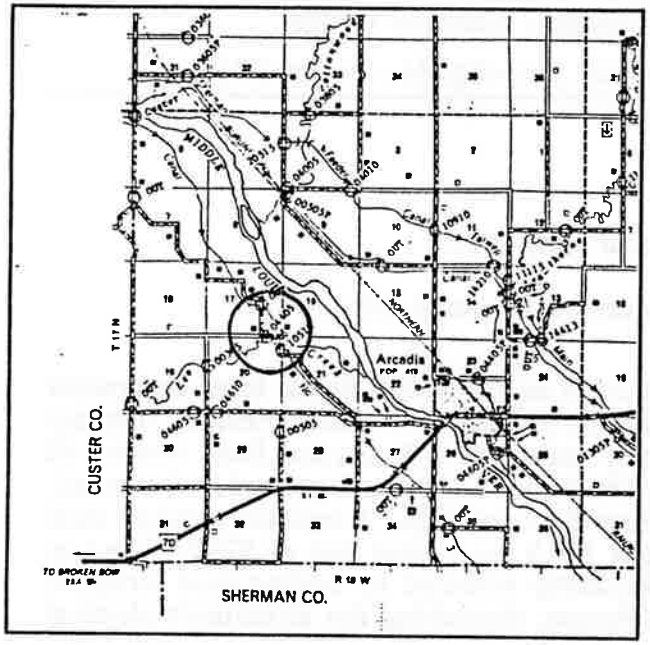
span number:	1	superstructure:	steel stringer
span length:	23.0'	substructure:	steel pile bent abutments with timber back- and wingwalls
total length:	24.0'	floor/decking:	earth over concrete decking
roadway wdt.:	31.8'	other features:	guardrail: south side: lattice with continuous endpost; north side: Armco

Early in May 1915 Valley County received unit price proposals for its annual bridge contract from seven bridge firms: local contractor John K. Jensen, the Reinforced Concrete Company, the Elkhart Bridge and Iron Company of Elkhart, Indiana, the Canton Bridge Company of Canton, Ohio, and the Western Bridge and Construction Company, Standard Bridge Company and Omaha Structural Steel Works, all from Omaha. As it had in previous years, the Canton Bridge Company received the contract. On June 18th the county ordered a small-scale bridge from Canton (designated as Structure No. 1749), to be placed over Lee Creek in Arcadia Township. A concrete-decked steel stringer span supported by steel pile bent abutments, the structure was completed by November 1915 for a total cost of $747. The Lee Creek Bridge has carried traffic on this county road since. The superstructure has been subsequently widened by adding steel stringers to one side, and in the process one of the original lattice guardrails has been replaced with Armco, disturbing the structure's physical integrity.

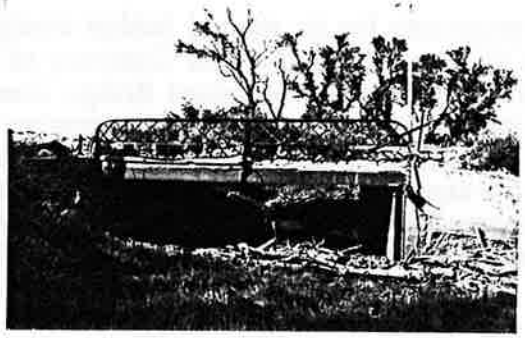
The counties of Nebraska built thousands of small-scale steel stringer bridges in the 1910s and 1920s, many of which survive today. With its extensive modifications, the Lee Creek Bridge is among the less noteworthy of those included in the statewide inventory.

NAME(S) OF STRUCTURE
Lee Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C008804405; **Valley County Bridge Book**, Bridge Number 7, located at County Engineer's Office, Valley County Courthouse, Ord, Nebraska; Valley County Supervisors' Record, Book 5: 4 May 1915 pp.16-17), 23 November 1915 (p. 41), located at Valley County Courthouse, Ord, Nebraska; field inspection by Clayton Fraser, 6 July 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Hawthorne Creek Bridge
NDOR: C008804405P

VALL02

DATE(S) OF CONSTRUCTION
1916

LOCATION
county road over Hawthorne Creek; S23, T17N, R16W
north edge of Arcadia; Valley County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 31)

CONDITION
good

OWNER
Valley County

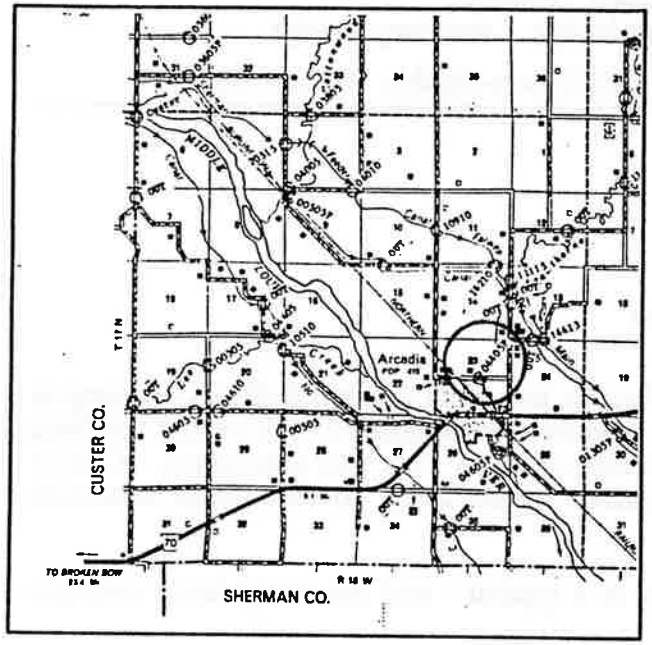
span number:	1	superstructure:	steel stringer
span length:	28.0'	substructure:	concrete abutments and wingwalls
total length:	29.0'	floor/decking:	earth covered concrete decking
roadway wdt.:	15.4'	other features:	guardrail: 2 lattice with continuous endposts

On March 14th, 1916, the Valley County Board of Supervisors ordered a small-scale steel bridge from the Canton Bridge Company of Canton, Ohio, which then held the annual bridge contract for the county. Carrying a county road over Hawthorne Creek on the northern edge of Arcadia, the bridge consisted of a nominal 30x16-foot steel stringer superstructure supported by concrete abutments. Canton completed it by October for a total cost of $1917. The Hawthorne Creek Bridge has carried traffic since, in essentially unaltered condition.

With its straightforward configuration and modest dimensions, the Hawthorne Creek Bridge is a typical - and relatively late - example of this common structural type.

NAME(S) OF STRUCTURE
Hawthorne Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C008804405P; **Valley County Bridge Book**, Bridge number 12, located at Valley County Engineer's Office, Valley County Courthouse, Ord, Nebraska; Valley County Supervisors' Record, Book 5: 14 March 1916 (p. 61), located at Valley County Courthouse, Ord, Nebraska; field inspection by Clayton Fraser, 6 July 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge VALL03
NDOR: C008813330

DATE(S) OF CONSTRUCTION
1915

LOCATION
county road over intermittent stream; S26/27, T19N, R14W
1.7 miles southeast of Ord; Valley County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 22)

CONDITION
good

OWNER
Valley County

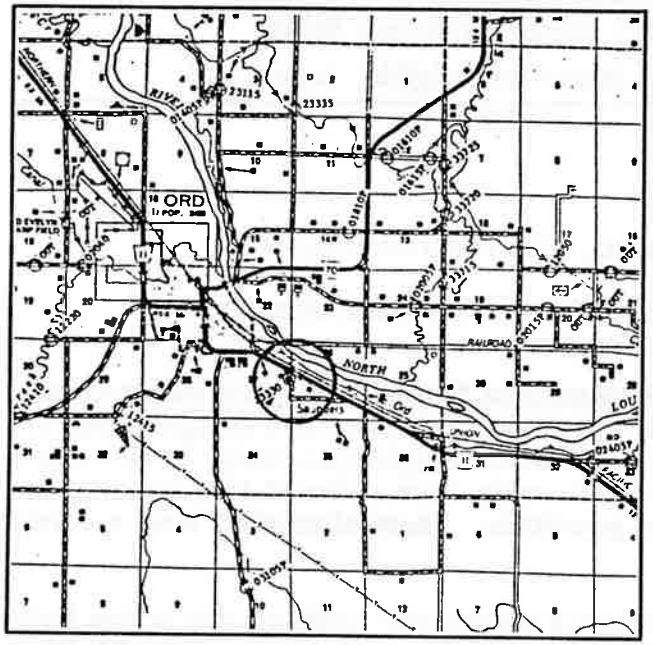
span number:	1	superstructure:	steel stringer
span length:	22.0'	substructure:	steel pile bents encased in concrete abutments, with concrete wingwalls
total length:	23.0'	floor/decking:	earth covered concrete decking
roadway wdt.:	16.1'	other features:	guardrail: east side: lattice with continuous endpost; west side: Armco

After awarding an annual bridge construction contract in May 1915 to the Canton Bridge Company of Canton, Ohio, the Valley County Board of Supervisors purchased several small-scale steel bridges in June. Among these was this concrete decked steel stringer structure over an intermittently flowing tributary of the North Loup River, in Ord Township. Canton completed the single-span bridge by November for a cost of $1259. Valley County Bridge Number 1737-B, as it was designated, has more recently been widened by extending the abutment backwalls, adding steel I-beam stringers and removing one of the original lattice guardrails. These alterations have severely compromised the structure's interpretive value.

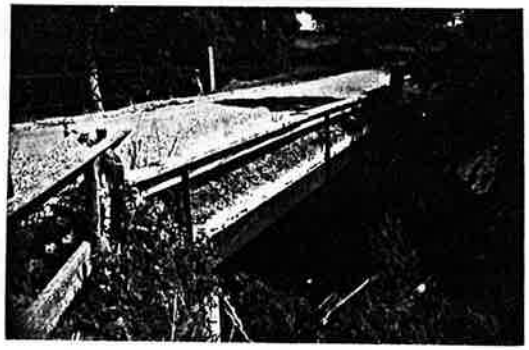
Originally a modest structure over an intermittent watercourse and now substantially altered by a subsequent addition, this bridge lacks the requisite level of significance or physical integrity to be considered eligible for the National Register.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C008813330; **Valley County Bridge Book**, Bridge Number 2, located at Valley County Engineer's Office, County Courthouse, Ord, Nebraska; Valley County Supervisors' Record, Book 5: 4 May 1915 (pp. 16-17), 23 November 1915 (p. 41), located at the Valley County Courthouse, Ord, Nebraska; field inspection by Clayton Fraser, 6 July 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Hawthorne Creek Bridge
NDOR: C008813610

VALL04

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over Hawthorne Creek; S30/31, T18N, R15W
5.5 miles northeast of Arcadia; Valley County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 25)

CONDITION
fair

OWNER
Valley County

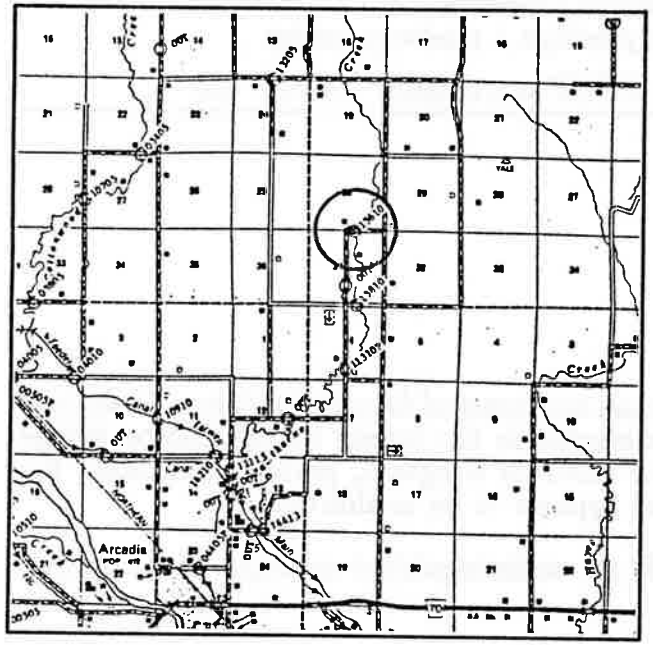
span number:	1	superstructure:	steel stringer
span length:	25.0'	substructure:	concrete abutment and wingwalls
total length:	26.0'	floor/decking:	concrete decking
roadway wdt.:	15.5'	other features:	guardrail: 2 lattice guardrails

This small-scale steel stringer structure carries a gravel-surfaced road over an intermittent stream northeast of Arcadia in Vinton Township. Although not mentioned specifically in county records, it appears similar to several bridges erected in the county by the Canton Bridge Company of Canton, Ohio, in the mid-1910s. The word SEWEITFORD is scratched in the concrete wingwall, perhaps indicating the substructural contractor. The bridge retains its original lattice guardrails on both sides and appears to be unaltered.

Modestly dimensioned, typically detailed and largely undocumented, this small structure is an undistinguished example of a common vehicular bridge type.

NAME(S) OF STRUCTURE
Hawthorne Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal, Structure Number C008813610; Valley County Supervisors' Record, 1905-1920, located at the Valley County Courthouse Ord, Nebraska; field inspection by Clayton Fraser, 6 July 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Turtle Creek Bridge
NDOR: C008821325P

VALL05

DATE(S) OF CONSTRUCTION
1916

LOCATION
county road over North Branch of Turtle Creek; S19, T20N, R15W
4.4 miles southeast of Elyria; Valley County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 29)

CONDITION
good

OWNER
Valley County

span number: 1
span length: 60.0'
total length: 61.0'
roadway wdt.: 18.5'

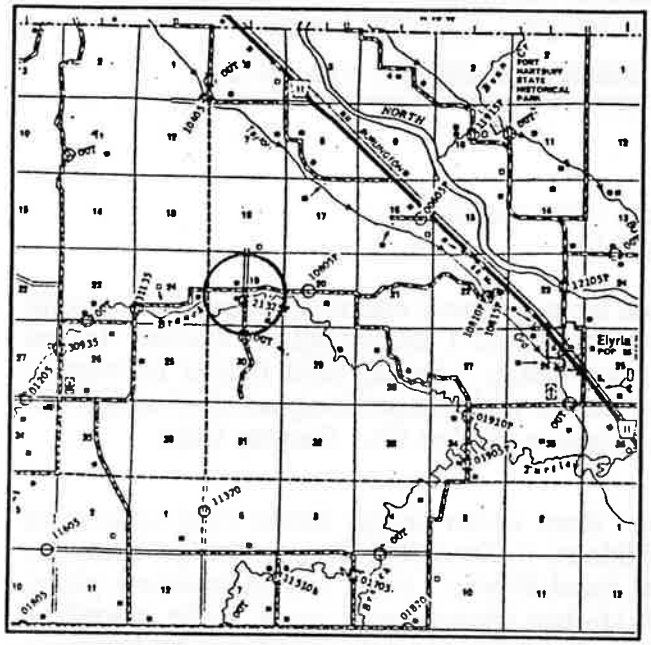
superstructure: steel, 3-panel, pin-connected Pratt pony truss with outriders
substructure: steel pile bent abutments with timber wingwalls
floor/decking: timber decking over I-beam stringers
other features: upper chord: 2 channels with cover plates and lacing; lower chord: 2 looped rectangular eyebars; vertical: 4 angles with batten plates; diagonal: 1 looped square eyebar; lateral bracing: round bar with threaded ends; floor beam: I-beam, field bolted to vertical beneath lower chord; guardrail: 2 lattice guardrails with decoratively scrolled straps and ends; endpost-mounted builder's plate: **The Canton Bridge Co. Canton Ohio**

Early in May 1915 Valley County received unit price proposals for its annual bridge contract from seven bridge firms: local contractor John K. Jensen, the Reinforced Concrete Company, the Elkhart Bridge and Iron Company of Elkhart, Indiana, the Canton Bridge Company of Canton, Ohio, the Western Bridge and Construction Company and the Omaha Structural Steel Works. As it had in previous years, the Canton Bridge Company received the contract. A month later the county ordered a 60x16-foot pinned pony truss, to be placed on steel pile bent abutments over the North Branch of Myra Creek, in Enterprise Township. Using steel components fabricated by Cambria, Canton completed the truss erection by November. Total cost: $1733, of which $1193 was attributable to superstructure cost. County Bridge 1737-A, as it was designated, carried traffic in this location for over 65 years. In 1981 the county removed the truss, widened it by replacing the floor beams, welded outriders onto the webs and moved it to its present location over the North Branch of Turtle Creek in Elyria.

Although in good physical condition, the Turtle Creek Bridge has been moved and substantially altered, diminishing its structural integrity. The structure is a typically configured and typically sized example of Nebraska's most common pony truss type.

NAME(S) OF STRUCTURE
Turtle Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C008821325P; **Valley County Bridge Book**, Bridge number 5, located at Valley County Engineer's Office, Valley County Courthouse, Ord, Nebraska; Valley County Supervisors' Record, 4 May 1915; 23 November 1915 (p. 41), located at the Valley County Courthouse, Ord, Nebraska; field inspection by Clayton Fraser, 6 July 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
North Loup Bridge
NDOR: C008833415

VALL06

DATE(S) OF CONSTRUCTION
1912

LOCATION
county road over the North Loup River; S24/25, T18N, R13W
1.5 miles northeast of North Loup; Valley County, Nebraska

USE (ORIGINAL / CURRENT)
highway bridge / roadway bridge

RATING NRHP eligible (score: 61)

CONDITION
good

OWNER
Valley County

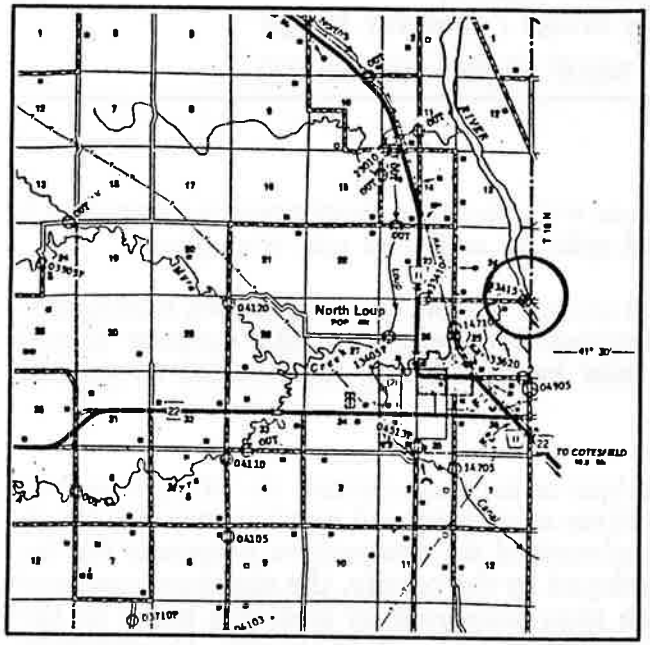
span number:	3	superstructure:	steel, 3-span, pin-connected Pratt through truss with pin/rigid Pratt pony truss approach
span length:	100.0'	substructure:	concrete abutments with concrete-filled steel cylinder and steel pile bent piers
total length:	337.0'	floor/decking:	concrete deck over I-beam stringers
roadway wdt.:	14.8'	other features:	upper chord: 2 channels with cover plates and lacing; bottom chord: 2 looped rectangular eyebars; vertical: 2 channels with lacing; diagonal: 2 looped rectangular eyebars; lateral bracing: round bar with threaded ends; floor beam: I-beam, field bolted to vertical beneath lower chord; guardrail: lattice

Throughout 1910, 1911 and early 1912, Valley County did not undertake any major new bridges on its road system. In 1912, however, the board of supervisors contracted for two substantial structures: one over the Middle Loup River at Arcadia and another over the North Loup River near the town of North Loup, in the southeast corner of the county. The clerk advertised for competitive proposals for the latter bridge in April and then re-advertised in July. According to plans and specifications developed by the county, the structure consisted of three 100-foot through trusses on steel cylinder piers, with a 40-foot pony truss approach span supported by steel pile bents on the south side. When bids were received in August, the county awarded the contract to the Empire Bridge Company of Omaha. Construction progressed slowly during the remainder of 1912. Empire completed the bridge by the following June for a total cost of $13,089, using components rolled by Cambria and Lackawanna. The North Loup Bridge has carried traffic since with only minimal maintenance, although since the routing of nearby State Highway 22 it has functioned in a secondary capacity. At least one of its trusses has apparently shifted on its foundations, and the bridge is currently scheduled for replacement.

The North Loup Bridge was the second structure built over the river by Valley County, preceded only by the span at Ord, the county seat. The latter structure was extensively rebuilt in 1916 and has since been demolished. Such multiple-span pinned through truss structures - most of which were comprised of medium-span Pratts - were once common in Nebraska. Almost all of these early bridges have since been replaced or substantially altered, however. The North Loup Bridge is historically and technologically significant as a well-preserved example of this now uncommon vehicular bridge type.

NAME(S) OF STRUCTURE
North Loup Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal, Structure Number C008833415; Valley County Supervisors' Record, Book 4: 3 April 1912 (page 477), 10 July 1912 (page 498), 27 August 1912 (page 506), 20 September 1912 (page 509), 9 June 1913 (page 539), 12 August 1913 (page 563), located at Valley County Courthouse, Ord, Nebraska; original construction drawing by Valley County Engineer, located at Valley County Engineer's Office, County Courthouse, Ord, Nebraska; field inspection by Clayton Fraser, 6 July 1989.

INVENTORIED BY
Clayton B. Fraser

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Ray Creek Bridge
NDOR: C008900710

WASH01

DATE(S) OF CONSTRUCTION
ca.1925

LOCATION
township road over Ray Creek; S26/27, T18N, R9E
3.0 miles northwest of Arlington; Washington County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 23)

CONDITION
good

OWNER
Washington County

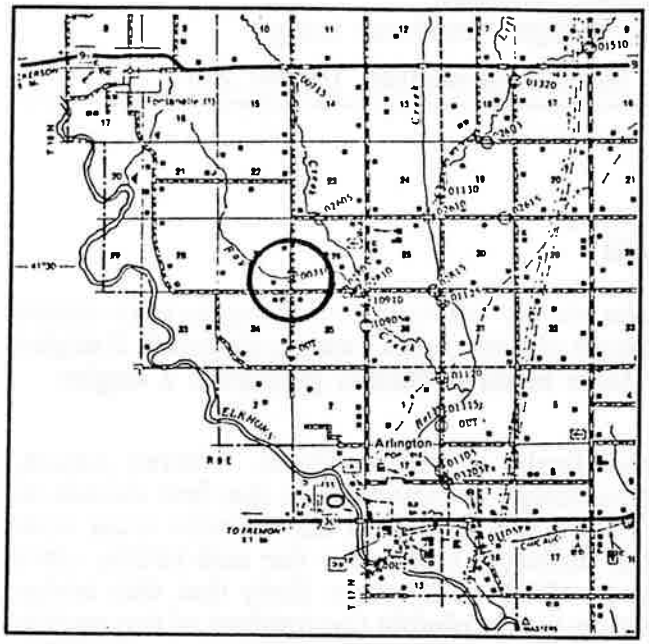
span number:	1	superstructure:	steel, 4-panel, rigid-connected Warren pony truss
span length:	50.0'	substructure:	I-beam piles with timber back- and wingwalls
total length:	51.0'	floor/decking:	concrete over I-beam stringers
roadway wdt.:	18.0'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 angles with batten plates; vertical: (outer) 2 angles with continuous plates, (inner) angle; diagonal: 2 angles with batten plates; lateral bracing: none; floor beam: I-beams; guardrail: 2 angles

This Warren pony truss carries a dirt road over Ray Creek. County records do not refer specifically to this structure. Warren ponies, however, are relatively uncommon in Nebraska. Although the state engineer's office used this design occasionally in the first decade of the twentieth century, the Pratt truss was adopted for virtually all state plans during the 1910s, and remained the favorite truss style throughout the 1920s. The 18-foot roadway width indicates that the Ray Creek Bridge was probably built after the mid-1910s, since earlier roadways were usually 16 feet wide or less. Washington County adopted state plans in 1913, so it seems likely that this bridge dates from the mid-1920s, when Warrens again reappeared in state standard plans. The structure was probably the product of the prolific bridge builders, E.S. Beaty and his son, E. Mark Beaty. Eugene S. Beaty moved to Blair, county seat of Washington County, in 1883, where he worked as a foreman for railroad bridge construction. E. Mark Beaty joined his father's business in 1908 after graduating from the Armour School of Technology in Chicago with a degree in Engineering. E.S. Beaty received his first contract to build bridges in Washington County in 1890. Beaty then received the annual contract to build all of the county's bridges in 1894, a contract he apparently held nearly every year until at least 1938. The Beaty's began doing work as the Beaty Contracting Company in 1913. The firm is credited with building hundreds of bridges in the Blair area.

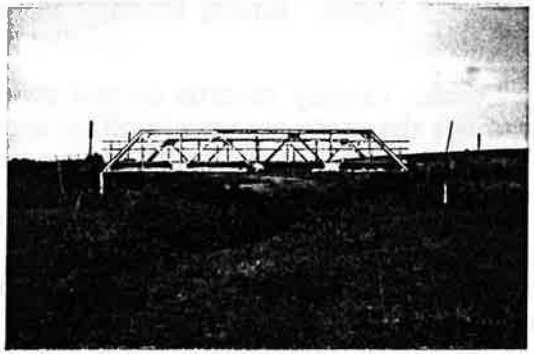
Warren pony trusses are rather uncommon in Nebraska, since the state engineer preferred the Pratt design during a major period of truss bridge construction in the 1910s and 1920s. The relatively short span of this structure, the lack of construction documentation, and the probable late date of its erection, however, diminish the significance of this bridge.

NAME(S) OF STRUCTURE
Ray Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C008900710; Rev. William H. Buss and Thomas T. Osterman, eds., **History of Dodge and Washington Counties, Nebraska and Their People**, II (Chicago: The American Historical Society, 1921), p. 850; **Washington County, Nebraska History**, comp. Washington County Historical Association (Dallas, Tex.: Taylor Publishing Company, 1980), n.p.; Washington County Board of Supervisors' Records, 1890-1938, located at the Washington County Courthouse, Blair, Nebraska; field inspection by Lon Johnson, 23 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Big Papillion Creek Bridge WASH02
NDOR: C008904010

DATE(S) OF CONSTRUCTION
ca.1930

LOCATION
county road over Big Papillion Creek; S28/33, T17N, R11E
1.2 miles northeast of Washington; Washington County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 26)

CONDITION
good

OWNER
Washington County

span number: 1
span length: 100.0'
total length: 101.0'
roadway wdt.: 19.5'

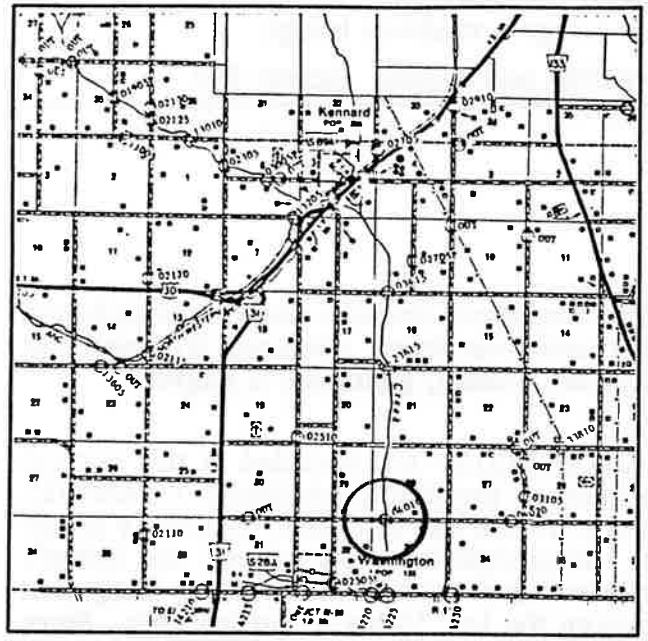
superstructure: steel, 5-panel, rigid-connected Pratt pony truss
substructure: not visible
floor/decking: concrete over I-beam stringers
other features: upper chord: 2 channels with cover plate and lattice; lower chord: 2 channels with batten plates both sides; vertical: 2 pair angles with continuous plates; diagonal: 2 angles with batten plates; lateral bracing: angle; floor beam: I-beam; guardrail: 2 angles

County records do not refer specifically to this bridge. It is similar to a nearby structure (C008914215 - not included in this survey) which carries a plate reading: "Capacity 15 tons. March 15, 1952." This bridge is also similar to the Bell Creek Bridge (**WASH03**). A plate on the Big Papillion Creek Bridge indicates a 20-ton capacity, but includes no date. Pony trusses had lost favor for county bridge construction by the early 1930s, superseded by more economical concrete slabs and steel stringer/girder spans. Given the bridge's relatively long 100-foot span, however, a pony truss may have been called for to save on substructural costs. Still, it seems likely that the plates are later additions. The truss's heavy construction suggests that the bridge dates from the late 1920s to early 1930s. Since the county adopted state standard plans in 1913, the bridge's design is likely based on state plans. The structure was probably the product of the prolific bridge builders E.S. Beaty and his son, E. Mark Beaty. Eugene S. Beaty moved to Blair, county seat of Washington County, in 1883, where he worked as a foreman for railroad bridge construction. E. Mark Beaty joined his father's business in 1908 after graduating from the Armour School of Technology in Chicago with a degree in Engineering. E.S. Beaty received his first contract to build bridges in Washington County in 1890. Beaty then received the annual contract to build all of the county's bridges in 1894, a contract he apparently held nearly every year until at least 1938. The Beatys began doing work as the Beaty Contracting Company in 1913. The firm is credited with building hundreds of bridges in the Blair area.

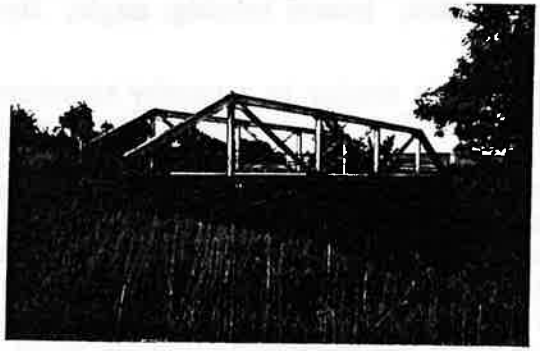
The Big Papillion Creek Bridge is typical of many bridges constructed throughout Nebraska in the 1920s. Its probable erection by local contractor E.S. Beaty is of interest, but lack of documentation diminishes the structure's significance.

NAME(S) OF STRUCTURE
Big Papillion Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C008904010; Rev. William H. Buss and Thomas T. Osterman, eds., **History of Dodge and Washington Counties, Nebraska and Their People**, II (Chicago: The American Historical Society, 1921), p. 850; **Washington County, Nebraska History**, comp. Washington County Historical Association (Dallas, Tex.: Taylor Publishing Company, 1980), n.p.; Washington County Board of Supervisors' Records, 1890-1938, located at the Washington County Courthouse, Blair, Nebraska; Washington County Board of Supervisors' Records, 1890-1938, located at the Washington County Courthouse, Blair, Nebraska; field inspection by Lon Johnson, 23 July 1989.

INVENTORIED BY	AFFILIATION	DATE
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bell Creek Bridge WASH03
NDOR: C008903205P

DATE(S) OF CONSTRUCTION
ca.1930

LOCATION
county road over Bell Creek; S7, T17N, R10E
northeast edge of Arlington; Washington County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 26)

CONDITION
good

OWNER
Washington County

span number: 1
span length: 100.0'
total length: 101.0'
roadway wdt.: 19.7'

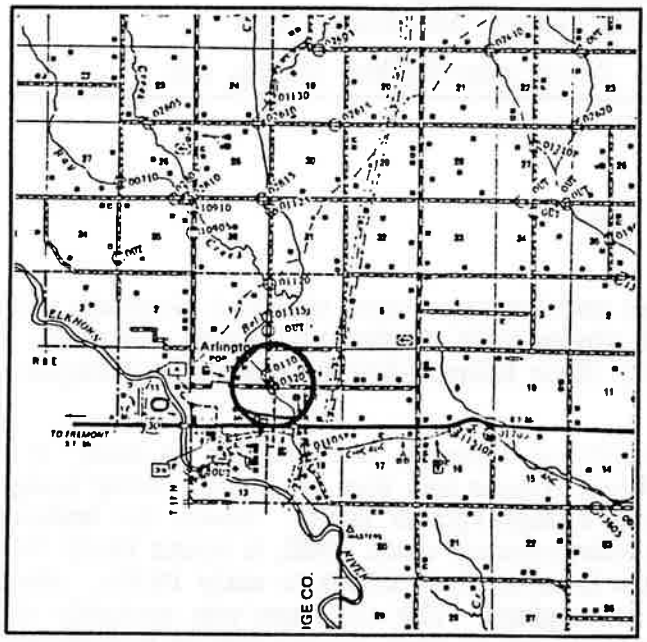
superstructure: steel, 5-panel, rigid-connected Pratt pony truss
substructure: I-beam piles with timber backwalls
floor/decking: concrete over I-beam stringers
other features: upper chord: 2 channels with cover plates and lattice; lower chord: 2 channels with batten plates, both sides; vertical: 2 pair angles with continuous plates; diagonal: 2 angles with plates; lateral bracing: angles; floor beam: I-beam; guardrail: 2 angles

County records do not refer specifically to this bridge. A plate on the bridge indicates a 20-ton capacity, but includes no date. It is similar to the Big Papillion Creek Bridge (**WASH02**), which is likewise undocumented. Pony trusses had lost favor for county bridge construction by the early 1930s, superseded by more economical concrete slabs and steel stringer/girder spans. Given the bridge's relatively long 100-foot span, however, a pony truss may have been called for to save on substructural costs. Still, it seems likely that the plates are later additions. The truss's heavy construction suggests that the bridge dates from the late 1920s to early 1930s. Since the county adopted state standard plans in 1913, the bridge's design is likely based on state plans. The structure was probably the product of the prolific bridge builders E.S. Beaty and his son, E. Mark Beaty. Eugene S. Beaty moved to Blair, county seat of Washington County, in 1883, where he worked as a foreman for railroad bridge construction. E. Mark Beaty joined his father's business in 1908 after graduating from the Armour School of Technology in Chicago with a degree in Engineering. E.S. Beaty received his first contract to build bridges in Washington County in 1890. Beaty then received the annual contract to build all of the county's bridges in 1894, a contract he apparently held nearly every year until at least 1938. The Beatys began doing work as the Beaty Contracting Company in 1913. The firm is credited with building hundreds of bridges in the Blair area.

The Bell Creek Bridge is typical of many bridges constructed throughout Nebraska in the 1920s. Its probable erection by local contractor E.S. Beaty is of interest, but lack of documentation diminishes the structure's significance.

NAME(S) OF STRUCTURE
Bell Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C008903250P; Rev. William H. Buss and Thomas T. Osterman, eds., **History of Dodge and Washington Counties, Nebraska and Their People**, II (Chicago: The American Historical Society, 1921), p. 850; **Washington County, Nebraska History**, comp. Washington County Historical Association (Dallas, Tex.: Taylor Publishing Company, 1980), n.p.; Washington County Board of Supervisors' Records, 1890-1938, located at the Washington County Courthouse, Blair, Nebraska; field inspection by Lon Johnson, 23 July 1989.

INVENTORIED BY	**AFFILIATION**	**DATE**
Lon Johnson, Renewable Technologies, Inc.	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
New York Creek Bridge
NDOR: C008921910P

WASH04

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
county road (Coll 21C) over New York Creek; S14, T19N, R10E
4.7 miles southwest of Herman; Washington County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 28)

CONDITION
good

OWNER
Washington County

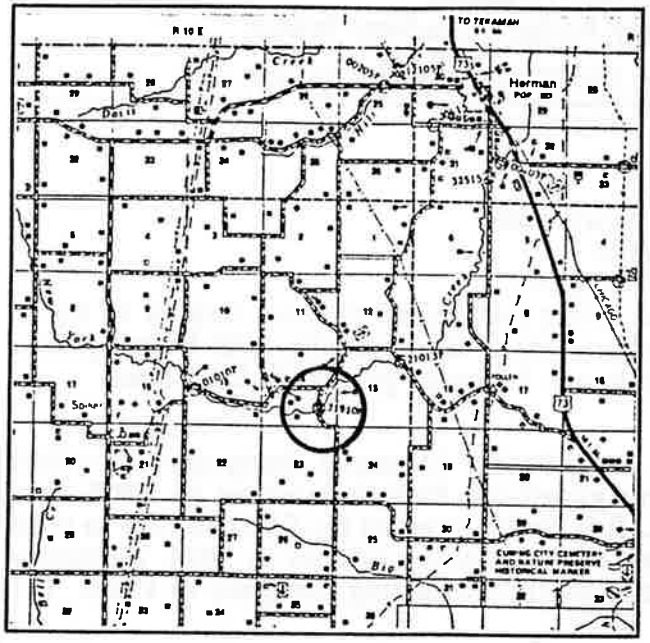
span number:	1	superstructure:	steel, 3-panel, pin- / rigid-connected Pratt pony truss
span length:	60.0'	substructure:	I-beam piles with timber back- and wingwalls
total length:	61.0'	floor/decking:	sheet piling with dirt overlay over I-beam stringers
roadway wdt.:	15.7'	other features:	top chord: 2 channels with cover plate and lacing (additional channel welded to top of cover plate); lower chord: punched eyebars; vertical: 2 pair angles with batten plates; diagonal: rods; lateral bracing: rod; floor beam: I-beam; guardrail: 2 channels

This bridge is probably the product of the prolific bridge builders E.S. Beaty and his son, E. Mark Beaty. Eugene S. Beaty moved to Blair in 1883 where he worked as a foreman for railroad bridge construction. E. Mark Beaty joined his father's business in 1908 after graduating from the Armour School of Technology in Chicago with a degree in Engineering. E.S. Beaty received his first contract to build bridges in Washington County in 1890. Beaty then received the annual contract to build all of the county's bridges in 1894, a contract he apparently held nearly every year until at least 1938. The Beatys began doing work as the Beaty Contracting Company in 1913. The firm is credited with building hundreds of bridges in the Blair area.

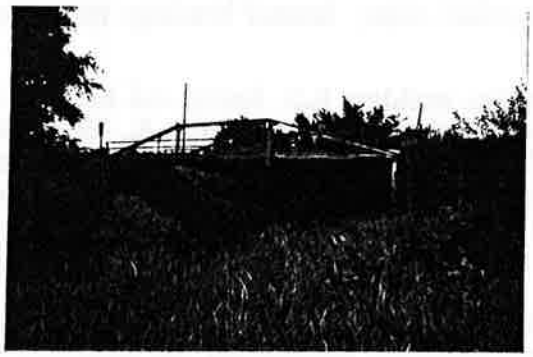
The New York Creek Bridge is typical of many bridges constructed throughout Nebraska in the 1910s. Its probable erection by local contractor E.S. Beaty is of interest, but lack of documentation diminishes the structure's significance.

NAME(S) OF STRUCTURE
New York Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C008921910); Rev. William H. Buss and Thomas T. Osterman, eds., **History of Dodge and Washington Counties, Nebraska and Their People**, II (Chicago: The American Historical Society, 1921), p. 850; **Washington County, Nebraska History**, comp. Washington County Historical Association (Dallas, Tex.: Taylor Publishing Company, 1980), n.p.; Washington County Board of Supervisors' Records, 1890-1938, located at the Washington County Courthouse, Blair, Nebraska; field inspection by Lon Johnson, 23 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Mill Creek Bridge
NDOR: C008923710

WASH05

DATE(S) OF CONSTRUCTION
ca.1945

LOCATION
township road over Mill Creek; S31/32, T19N, R10E
4.2 mile southeast of Blair; Washington County, Nebraska

USE (ORIGINAL / CURRENT)
military bridge / roadway bridge

RATING NRHP non-eligible (score: 25)

CONDITION
good

OWNER
Washington County

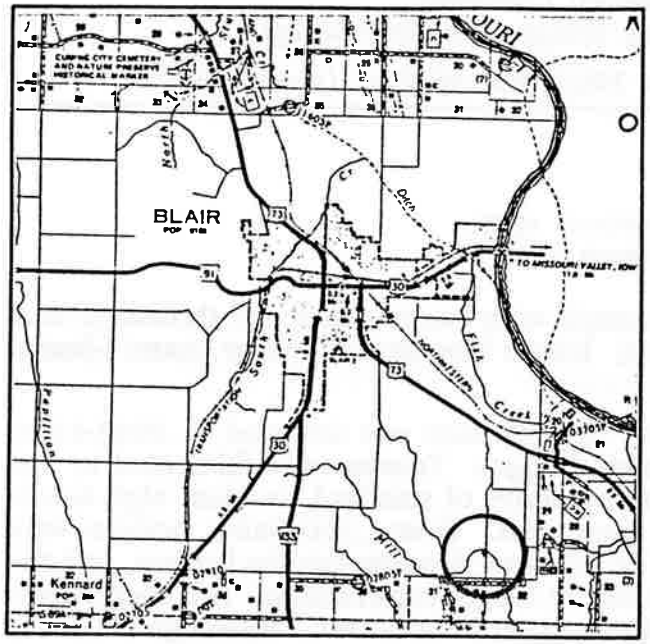
span number:	1	superstructure:	steel, 8-panel, Bailey truss with I-beam approach span
span length:	80.0'	substructure:	I-beam piles with timber backwalls and I-beam pier
total length:	103.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	18.0'	other features:	upper and lower chord: (double row) 2 channels with batten plates and threadless nuts alternating; vertical and diagonal: channels; lateral bracing: rod; floor beam: I-beam

Proceedings of the Washington County Supervisors do not refer specifically to this bridge. The structure was designed in 1940-41 by British engineer Donald Bailey in response to the wartime need for portable, easy to assemble bridges. Trusses were fabricated by five companies in the United States as well as a number of firms in England. By selecting from a series of standard, welded, high-tensile structural steel panels, troops could quickly construct a bridge without the aid of heavy equipment. Over 1,500 Bailey bridges were created during the war. In the decade following the war, surplus Bailey trusses were sold to highway departments for bridges, and the trusses were also adapted for use as river piers, structural roof girders, and falsework for concrete bridge construction. The components arrived in wood boxes ready for assembly. Another Bailey truss (**KNOX05**) was sold to Knox County for $1.00. Washington County probably received theirs under a similar arrangement.

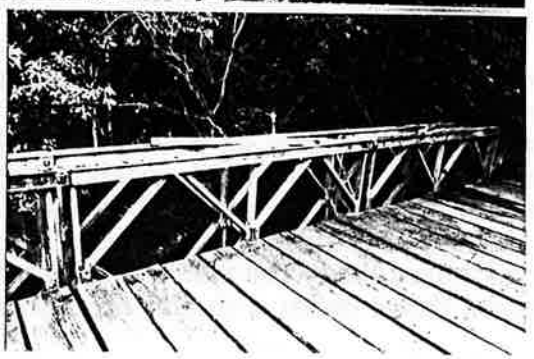
Although this bridge is of more recent construction than the usual 50 year cut-off for National Register eligibility, the date of the design's conception is now past that threshold. There is only one other Bailey bridge known to exist in Nebraska (**KNOX05**). The bridge serves as an example of the transfer of technology from war time to peace time, from military to civilian. Given the design, the history of its development, and its role in the post-war transition, the Mill Creek Bridge has an important place in the chronicle of Nebraska's bridges.

NAME(S) OF STRUCTURE
Mill Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C008923710; phone interview with Don Jiracek, Knox County Highway Engineer, 18 May 1990; "Bailey Bridging in Peacetime," **Engineering** 178 (13 August 1954): 218-20; "The Evolution of the Bailey Bridge," **Engineering** 162 (13 September 1946): 245; "Fabricating the Bailey Military Bridge," **Engineering News-Record**, 26 July 1945, pp. 104-107; field inspection by Lon Johnson, 23 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Abraham Lincoln Memorial Bridge [Blair Bridge] WASH06
NDOR: S030 45055

DATE(S) OF CONSTRUCTION
1928-29

LOCATION
U.S. Highway 30 over the Missouri River; S8, T18N, R12E
east edge of Blair; Washington County, Nebraska

USE (ORIGINAL / CURRENT)
highway bridge / highway bridge

RATING determined NRHP eligible (score: 74)

CONDITION
excellent

OWNER
Nebraska Department of Roads

span number: 3
span length: 333.0'
total length: 770.0'
roadway wdt.: 20.0'

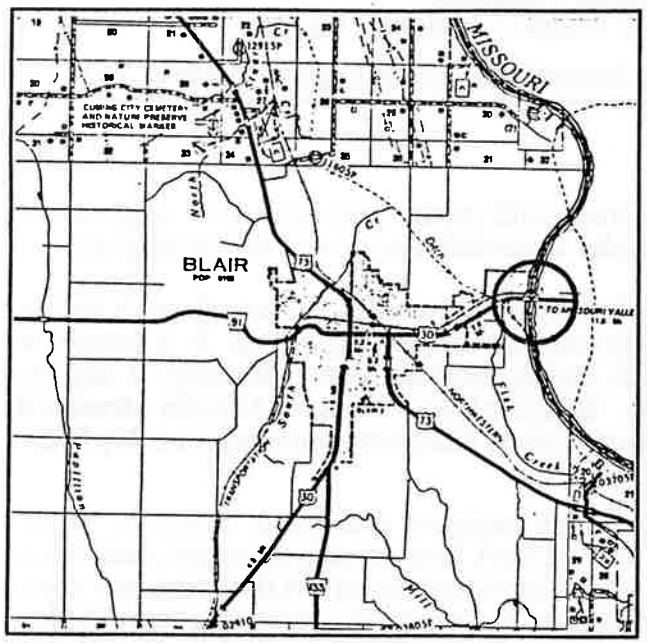
superstructure: steel, 7-panel, riveted Pennsylvania through truss with girder and deck truss approaches
substructure: concrete abutments with wood pile bents under approach spans and concrete piers
floor/decking: grating over transverse I-beam stringers
other features: upper chord: 2 channels with cover plate and lattice; lower chord: 2 channels with batten plates; vertical, diagonals, subdivision: 2 pair angles with lacing; sway: 2- X panels of 2 angles; top lateral bracing: 2 angles with lacing; bottom lateral bracing: 2 angles; floor beam: I-beam; guardrail: 3 channels; bridge plate: **Abraham Lincoln Memorial Bridge, Built by Nebraska-Iowa Bridge Company,** [list of directors], **opened June 29, 1929**

Blair was the site of an early railroad bridge, built in 1882-83 and designed by prominent bridge engineer George S. Morison. Ferry service had long been available at this location. After development of the Lincoln Highway, the nation's first transcontinental road, local boosters promoted this route as a short-cut bypassing Omaha. By the mid-1920s, the ferry was servicing about 14,000 cars per year. After several unsuccessful efforts to get a vehicular bridge at this location, Blair attorney Reed O'Hanlon formed the Nebraska-Iowa Bridge Company July 1927 and obtained a Congressional charter for construction of a toll bridge. O'Hanlon's group was backed by the Woods Brothers Construction Company of Lincoln, a major contracting firm which had already been involved with development of five Mississippi River bridges and was later to work on a number of other bridges over the Missouri. Harrington, Howard and Ash, a leading engineering firm, were responsible for the design of the bridge. Sverdrup and Parcel of St. Louis served as consulting engineers. The Washington County Board of Supervisors approved the plans and specifications for the bridge in May 1928, and preliminary construction began in July. Construction was overseen by Woods Brothers. The 1,340-foot superstructure was built by the Wisconsin Bridge and Iron Company, Milwaukee. It consisted of three massive Pennsylvania truss spans that matched the pier spacing of the existing railroad bridge, immediately upriver, with steel deck truss, girder and steel stringer approaches on both sides. The Kansas City Bridge Company was responsible for the substructure, which included four enormous concrete piers resting on solid limestone seventy feet below the water line. The bridge was opened to traffic on June 29, 1929. Total construction cost: $921,260. As O'Hanlon had hoped, the Lincoln Highway was indeed re-routed to cross the Blair Bridge. The company collected tolls until the states of Nebraska and Iowa purchased it jointly in 1962. With its replacement currently under construction, the Blair Bridge is scheduled for demolition. It is significant as a nationally important interstate crossing of the Missouri River on the Lincoln Highway, and it is noteworthy for its association with the toll bridge industry in the 1920s and 1930s. The structure is technologically important as a long-span river bridge, one of fifteen similar Pennsylvania trusses erected over the Missouri River from South Dakota to Missouri in the 1920s.

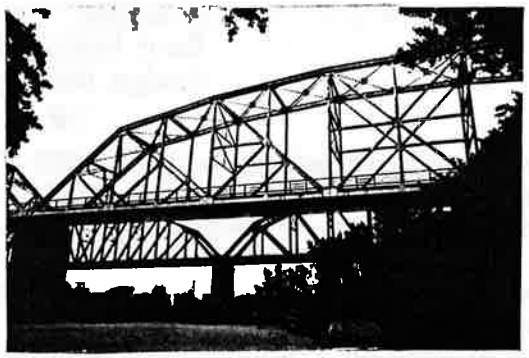
NAME(S) OF STRUCTURE

Abraham Lincoln Memorial Bridge [Blair Bridge]

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number S030 45055; Clayton B. Fraser, "Abraham Lincoln Memorial Bridge," Historic American Engineering Record report prepared for the Iowa Department of Transportation, 1987 (see HAER No. NE-1); Washington County Supervisors' Record, 14 May 1928, located at the Washington County Courthouse, Blair, Nebraska; "Lincoln Highway Registration Form," nomination to National Register of Historic Places, in Nebraska State Historical Society, Lincoln; W.G. Hill, "The Lincoln Memorial Bridge," **Nebraska Blue Print**, March 1929, pp. 5-6; Forrest B. Shrader, **A History of Washington County, Nebraska**, Omaha: Magic City Printing Company, 1937, p. 341; **Blair Tribune**, 28 May 1925, 26 January 1928, 1 March 1928, 3 May 1928, 17 May 1928, 20 June 1928, 12 July 1928, 17 January 1929, 4 July 1929; **Omaha Bee**, 26 July 1929; **Omaha World-Herald**, 26 July 1929; **Blair Enterprise**, 11 October 1962; field inspection by Lon Johnson, 24 July 1989.

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Blair Underpass WASH07
NDOR: U028503505P

DATE(S) OF CONSTRUCTION
ca.1923

LOCATION
Chicago and North Western Railroad over city street; S7, T19N, R10E
Blair; Washington County, Nebraska

USE (ORIGINAL / CURRENT)
railroad overpass / railroad overpass

RATING potentially NRHP eligible (score: 43)

CONDITION
excellent

OWNER
Chicago and North Western Transportation Company

span number:	3	superstructure:	steel deck girder
span length:	86.0'	substructure:	ashlar-faced stone abutments with stepped wingwalls
total length:	258.0'	floor/decking:	railroad ties
roadway wdt.:	5.0'	other features:	girders are built up of steel plate riveted w/ angles; top lateral bracing: crossed, angle sections; bottom lateral bracing: Warren-type configuration of angles w/ horizontal angle sections at each panel and at each mid-point.

Washington County Board of Supervisors' Records do not refer specifically to the construction of this bridge, probably because it was built by the railroad and is within the boundaries of the City of Blair. The structure carries the curved tracks of the Chicago Northwestern Railroad over a local road. The three steel, 86-foot, deck girder spans rest on piers and abutments with stepped wingwalls of ashlar-faced stone. These abutments and piers appear similar to those on a railroad bridge over the Missouri River just to the east. In 1923-24, the Chicago-Northwestern replaced the superstructure of its 1884 Missouri River bridge with new steel truss and plate girder spans, which were fabricated and erected by the American Bridge Company. The original piers and cut-waters, made of limestone from Mankato, Minnesota, and blue granite from St. Cloud, Minnesota, were reused for the new structure. Stone for the new abutments may have come from the same quarries. If the Blair Underpass was built at this time, the same suppliers were perhaps used.

Separation of rail and vehicular traffic became an important focus for highway planners in the 1920s and 1930s as the number of vehicles and, concomitantly, the number of grade crossing accidents, increased. As one of several urban overpasses built in Nebraksa during this period, the Blair Underpass represents this transportation trend.

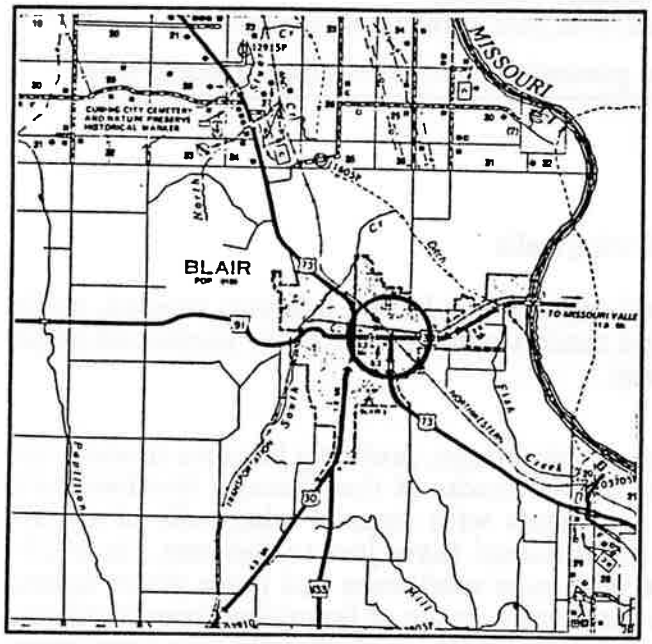
INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

NAME(S) OF STRUCTURE
Blair Underpass

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number U028503505P; Washington County Board of Supervisors' Records, 1890-1938, located at the Washington County Courthouse, Blair, Nebraska; H.J. Kesner, "Bridge Design as a Study in Evolution," **Nebraska Blue Print**, April 1925, p.5.

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Dog Creek Bridge
NDOR: C009001345

WAYN01

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
county road over Dog Creek; S1/6, T27N, R1/2E
5.2 miles northwest of Carroll; Wayne County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 32)

CONDITION
good

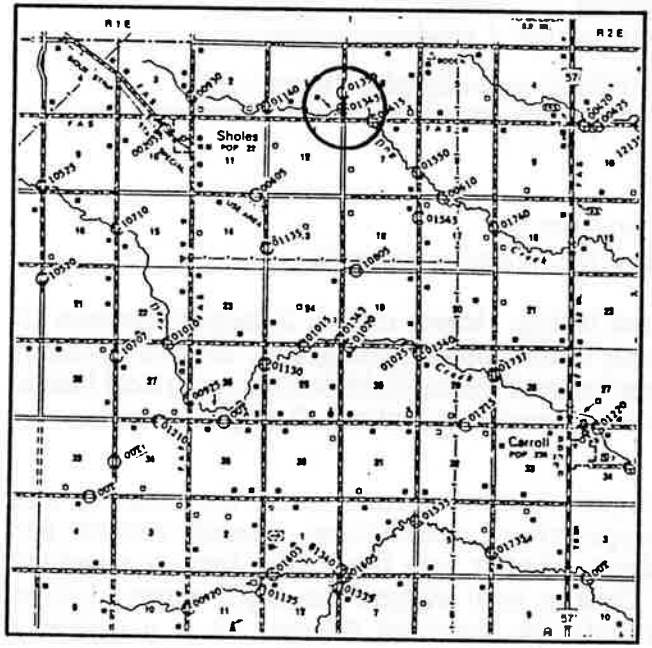
OWNER
Wayne County

span number:	1	superstructure:	steel, 5-panel, pin- / rigid-connected Pratt pony truss
span length:	70.0'	substructure:	steel I-beam pile bent abutments with timber back- and wingwalls
total length:	72.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	14.4'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 looped eyebars (3 in center panel); vertical: 2 pair angles with batten plates; diagonal: looped eyebars; counter: square eyerod with turnbuckle; floor beam: I-beam, field bolted to vertical below lower chord; lateral bracing: rod with threaded ends; guardrail: 2 angles

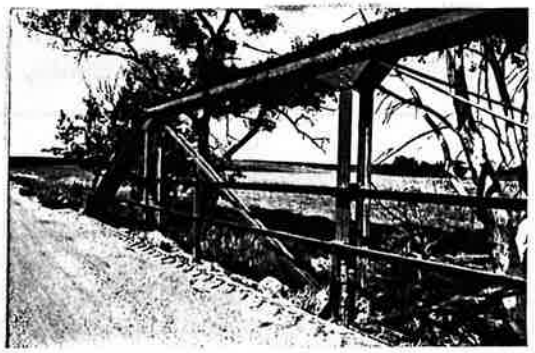
Located northwest of Carroll in north-central Wayne County, this small-scale bridge carries a gravel-surfaced road across Dog Creek. The structure consists of a single-span pinned Pratt pony truss with bolted gusset plates at the upper chord connections. County records are vague as to references to specific bridges, but the design and dimensions of this truss indicate that it was fabricated from a standard design of the Nebraska State Engineer around 1915. The Standard Bridge Company of Omaha held Wayne County's annual bridge construction contracts from 1904 through the 1920s, and this structure was most likely built by Standard Bridge. It is a typically configured example of one of Nebraska's most common vehicular truss types.

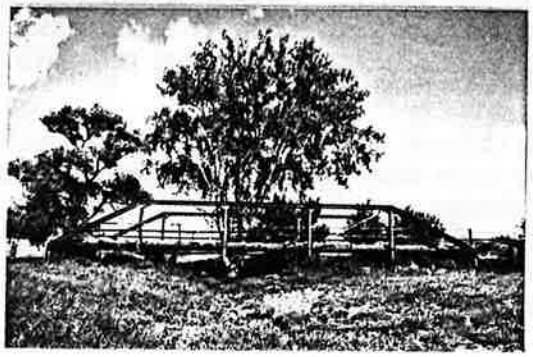
NAME(S) OF STRUCTURE
Dog Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C009001345; field inspection by Fred Quivik, 19 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Plum Creek Bridge
NDOR: C009003105

WAYN02

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over Plum Creek; S27/28, T25N, R3E
6.0 miles southeast of Winside; Wayne County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 29)

CONDITION
good

OWNER
Wayne County

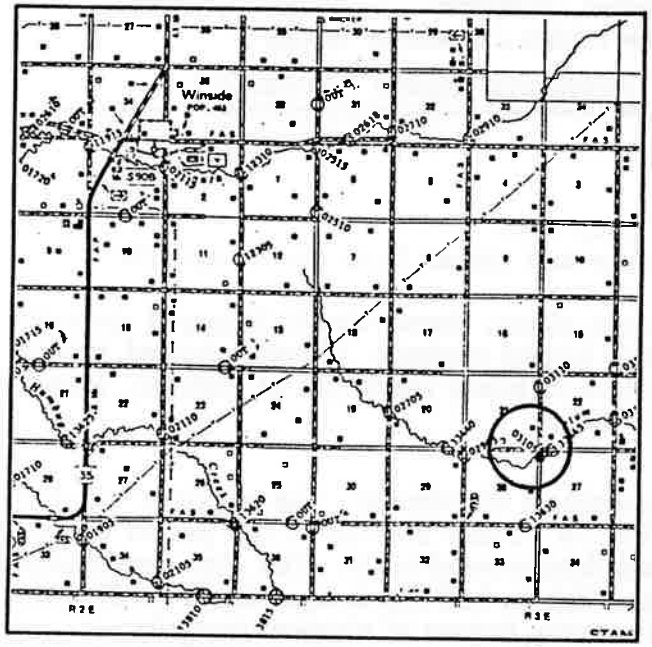
span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt half-hip pony truss
span length:	50.0'	substructure:	steel I-beam pile bent abutments with concrete and timber back- and wingwalls
total length:	51.0'	floor/decking:	timber deck over timber stringers
roadway wdt.:	15.8'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 looped eyebars; vertical: 2 pair angles with lacing; diagonal: looped eyebars; counter: looped eyebar with turnbuckle; floor beam: I-beam, U-bolted to lower chord pin at vertical; lateral bracing: rod with threaded ends; guardrail: lattice

This small-scale bridge carries a gravel-surfaced county road across Plum Creek, six miles southeast of Winside. The structure consists of a single Pratt half-hip pony truss, supported by steel pile bent abutments. Although Wayne County records of the period do not mention this structure specifically, the truss's detailing and dimensions suggest a fabrication date around 1905. The Standard Bridge Company of Omaha held the county's annual bridge contracts from 1904 through the 1920s. With its half-hip design, this truss displays the earmarks of a Standard Bridge Company structure. Essentially unaltered, it retains an average degree of physical integrity.

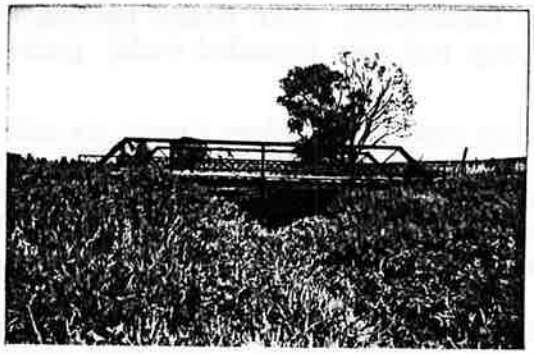
The Standard Bridge Company, like many midwestern bridge erectors, marketed the Pratt half-hip pony truss extensively in the early 1900s. Lacking a vertical at the hip connection, it was slightly lighter - and thus cheaper to fabricate - than the standard Pratt truss. The state engineer's office did not adopt the half-hip design as a state standard, however, and as the counties began using the state standards increasingly in the mid-1910s, erection of half-hip ponies decreased rapidly. Nevertheless, numerous half-hip trusses remain in use on Nebraska's secondary roads today. With its construction history largely undocumented, the Plum Creek Bridge is not one of the more noteworthy examples.

NAME(S) OF STRUCTURE
Plum Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C009003105; field inspection by Fred Quivik, 19 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Coon Creek Bridge
NDOR: C009005115

WAYN03

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over Coon Creek; S19/20, T26N, R5E
6.5 miles southeast of Wayne; Wayne County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 29)

CONDITION
good

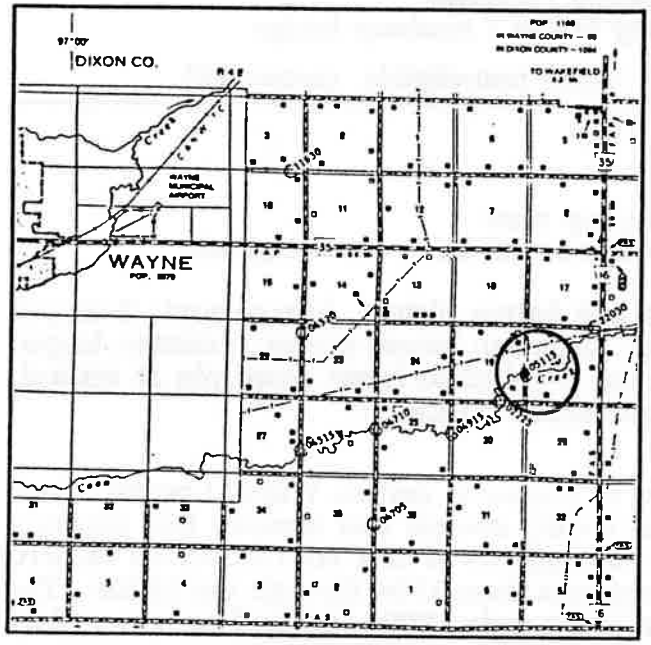
OWNER
Wayne County

span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt half-hip pony truss
span length:	40.0'	substructure:	steel I-beam pile abutments with timber and concrete back- and wingwalls
total length:	40.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	13.3'	other features:	upper chord: 2 channels with cover plate and batten plates; lower chord: 2 looped eyebars; vertical: 2 pair angles with lacing; diagonal: looped eyebar; counter: looped eyebar with turnbuckle; floor beam: I-beam, U-bolted to lower chord pin at vertical; lateral bracing: rod with threaded ends; guardrail: lattice

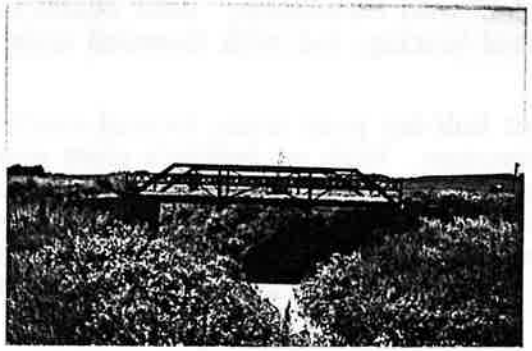
The Coon Creek Bridge is a four-panel, pinned Pratt half-hip pony truss, located southeast of Wayne in eastern Wayne County. Steel for the structure was rolled by the Inland Steel Company. With no builder's plate and no county records that mention this structure specifically, its history is largely undocumented. Based on its detailing and dimensions, the truss appears to have been fabricated ca.1910 by the Standard Bridge Company of Omaha, which held Wayne County's annual bridge contracts from 1904 through the 1920s. The bridge is one of thousands of such small-scale, pinned pony trusses erected across Nebraska in the early 1900s. Located on a secondary county road, it has played only a marginal role in the development of eastern Nebraska transportation.

NAME(S) OF STRUCTURE
Coon Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C009005115; Wayne County Bridge Record, located at the Wayne County Courthouse, Wayne, Nebraska; field inspection by Fred Quivik, 19 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Dog Creek Bridge
NDOR: C009012330

WAYN04

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over Dog Creek; S23/24, T27N, R2E
2.5 miles northeast of Carroll; Wayne County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 29)

CONDITION
good

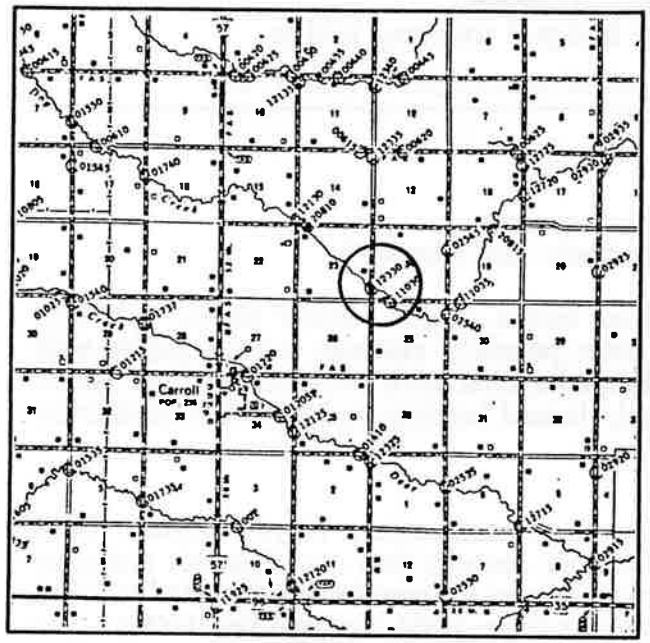
OWNER
Wayne County

span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt half-hip pony truss
span length:	50.0'	substructure:	steel I-beam pile bent abutments with timber back- and wingwalls
total length:	50.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	15.5'	other features:	upper chord: 2 channels with cover plate and batten plates; lower chord: 2 looped eyebars (outer panels), 2 punched eyebars (inner panels); vertical: 2 pairs angles with lacing; diagonal: looped eyebars; counter: looped eyebar with turnbuckle; floor beam: I-beam, U-bolted to lower chord pin at vertical; lateral bracing: rod with threaded ends; guardrail: lattice

The Dog Creek Bridge is a four-panel, pinned Pratt half-hip pony truss, located northeast of Carroll in northeastern Wayne County. Steel for the structure was rolled by the Inland Steel Company. With no builder's plate and no county records that mention this structure specifically, its history is largely undocumented. Based on its detailing and dimensions, the truss appears to have been fabricated ca.1910 by the Standard Bridge Company of Omaha, which held Wayne County's annual bridge contracts from 1904 through the 1920s. The bridge is one of thousands of such small-scale, pinned pony trusses erected across Nebraska in the early 1900s. Located on a secondary county road, it has played only a marginal role in the development of eastern Nebraska transportation.

NAME(S) OF STRUCTURE
Dog Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C009012330; field inspection by Fred Quivik, 19 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Dog Creek Bridge
NDOR: C009020810

WAYN05

DATE(S) OF CONSTRUCTION
ca.1910

LOCATION
county road over Dog Creek; S14/23, T27N, R2E
2.5 miles northeast of Carroll; Wayne County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 29)

CONDITION
good

OWNER
Wayne County

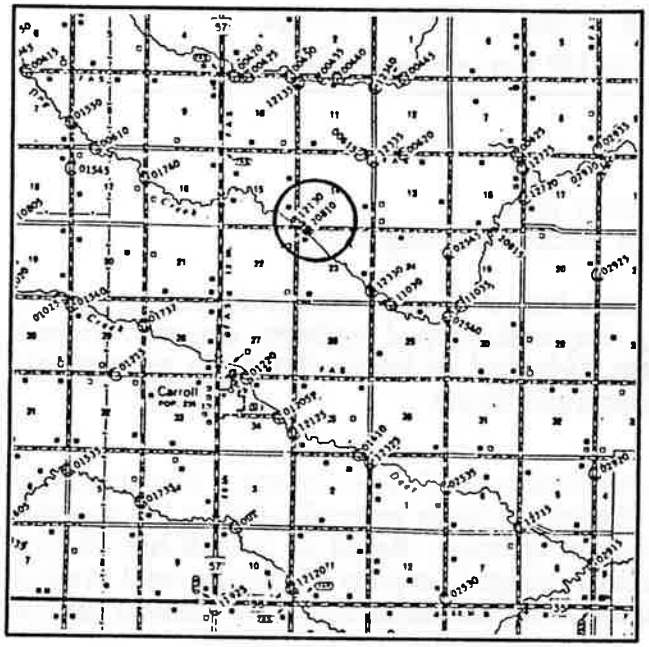
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt half-hip pony truss
span length:	44.0'	substructure:	steel I-beam pile bent abutments with timber back- and wingwalls
total length:	46.0'	floor/decking:	timber deck over I-beam stringers
roadway wdt.:	16.0'	other features:	upper chord: 2 channels with cover plate and batten plates; lower chord: 2 looped eyebars; vertical: 2 pair angles with lacing; diagonal: looped eyebars; counter: looped eyebar with turnbuckle; floor beam: I-beam, U-bolted to lower chord pin at vertical; lateral bracing: rod with threaded ends; guardrail: lattice

This bridge carries a gravel-surfaced county road across Dog Creek northeast of Carroll in northeastern Wayne County. The structure is comprised of a pinned Pratt half-hip pony truss, supported by steel pile bent abutments. County records generally fail to list specific bridges in their discussion of bridge work, making definitive identification of this modest structure difficult. Based on its half-hip design, physical condition and pinned connections, this bridge appears to date to ca.1910. The Standard Bridge Company of Omaha held Wayne County's annual bridge contracts from 1904 through the 1920s. Essentially unaltered, this truss bears the earmarks of a Standard Bridge structure.

The Standard Bridge Company developed its own designs for the pinned Pratt half-hip pony truss and marketed it extensively during the early 1900s. With annual contracts for such eastern Nebraska counties as Wayne, Cuming, Thurston, Stanton, Dodge and Burt, the firm erected hundreds of half-hip trusses between 1900 and 1920. Many of these remain in place today. As an undocumented example of this common structural type, the Dog Creek Bridge appears to lack any appreciable level of historical or technological significance.

NAME(S) OF STRUCTURE
Dog Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C009020810; field inspection by Fred Quivik, 19 July 1989.

INVENTORIED BY
Lon Johnson, Renewable Technologies, Inc.

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Willow Creek Bridge WEBS01
NDOR: C009123540

DATE(S) OF CONSTRUCTION
1911

LOCATION
county highway over Willow Creek; S12, T2N, R10W
1.7 miles east, 0.3 miles south of Cowles; Webster County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 38)

CONDITION
fair

OWNER
Webster County

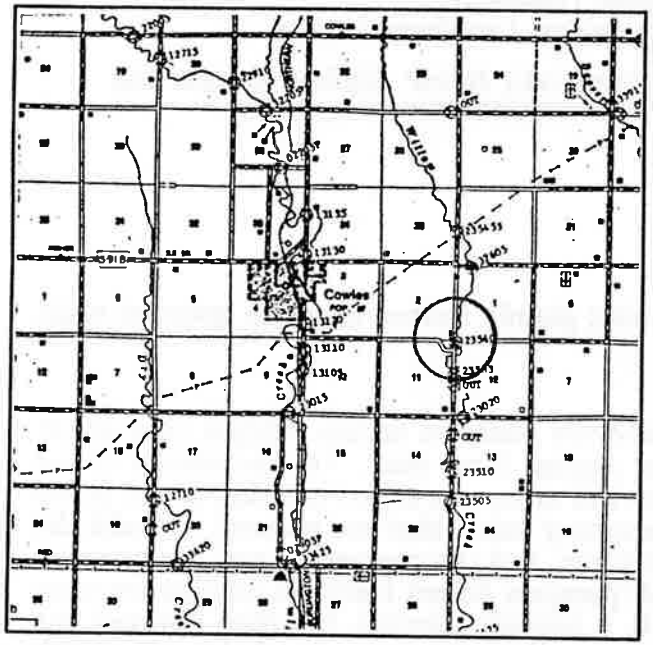
span number:	1	superstructure:	concrete filled spandrel arch
span length:	36.0'	substructure:	concrete abutments and wingwalls
total length:	38.0'	floor/decking:	gravel over earth fill
roadway wdt.:	18.4'	other features:	railing: metal gaspipe set on low concrete curbs; plainly formed concrete spandrel walls with flush arch ring

Located over Willow Creek near the small town of Cowles, this bridge is one of two small-scale concrete arches bridges (the other: WEBS02) that the county board ordered built over Willow Creek in 1911. The minutes for August 22nd read: "On the matter of the bridges across Willow Creek... it was moved and seconded that the building of said bridges be left open to a called meeting of the board to be held as soon as plans for the bridges shall be submitted, and that inasmuch as an emergency exists that we proceed to build the bridges." Unfortunately, county records do not provide any other information on these structures, and the contractor and designer are unknown. The bridges, however, were probably not designed by the state engineer, since their parapets do not resemble any known state plans from the period. Indeed, when the county first began to build concrete bridges in 1910, it initially adopted, but then rejected, the state's concrete plans. Early in 1913, the board once again rejected state concrete plans, declaring "that they were not in harmony with the board's ideas as to what they want." Webster County later that year finally did embrace the state standards, although no other, later arches remain today.

The two Willow Creek Bridges appear to have been the first major concrete vehicular bridges built in Webster County. They are significant for their representation of Webster County's earliest experimentation with concrete construction. Although badly weathered, this span is unaltered and possesses a high degree of physical integrity.

NAME(S) OF STRUCTURE
Willow Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C009123540; Proceedings of the Webster County Commissioners, located in Webster County Courthouse, Red Cloud, Nebraska, see the following entries in Volume D: 7 December 1909 (p. 351), 24 March 1910 (p. 381), 15 April 1910 (p. 385), 22 August 1911 (p. 483), 26 February 1913 (p. 601), 5 March 1913 (p. 601), 12 August 1913 (p. 633); **Ninth Biennial Report of the State Board of Irrigation, Highways, and Drainage, 1910-1912**, see included concrete bridge plans; field inspection by Jeffrey A. Hess, 22 July 1989

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Willow Creek Bridge
NDOR: C009132605

WEBS02

DATE(S) OF CONSTRUCTION
1911

LOCATION
county highway over Willow Creek; S1, T2N, R10W
2 miles east of Cowles; Webster County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING potentially NRHP eligible (score: 38)

CONDITION
fair

OWNER
Webster County

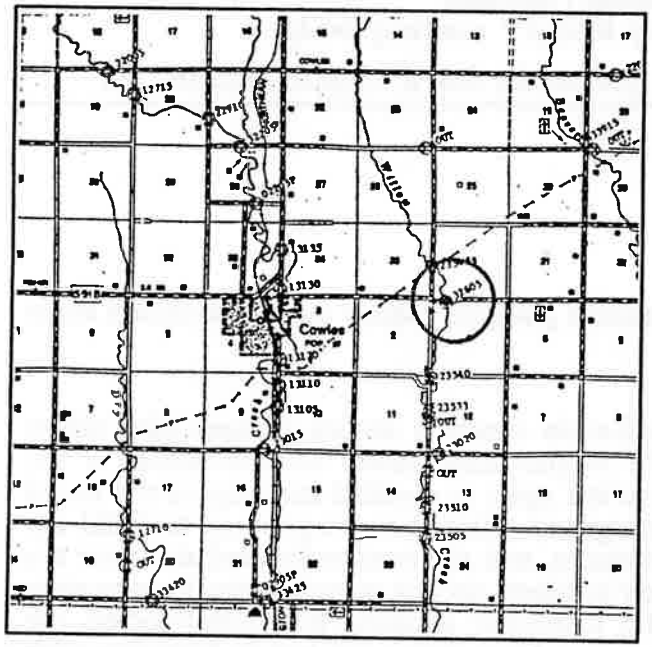
span number:	1	superstructure:	concrete filled spandrel arch
span length:	38.0'	substructure:	concrete abutments and wingwalls
total length:	41.0'	floor/decking:	gravel over earth fill
roadway wdt.:	18.5'	other features:	railing: gaspipe rails and posts set on low concrete parapet; plainly formed spandrel walls with flush arch ring

Located over Willow Creek near the small town of Cowles, this bridge is one of two small-scale concrete arches bridges (the other: WEBS01) that the county board ordered built over Willow Creek in 1911. The minutes for August 22nd read: "On the matter of the bridges across Willow Creek... it was moved and seconded that the building of said bridges be left open to a called meeting of the board to be held as soon as plans for the bridges shall be submitted, and that inasmuch as an emergency exists that we proceed to build the bridges." Unfortunately, county records do not provide any other information on these structures, and the contractor and designer are unknown. The bridges, however, were probably not designed by the state engineer, since their parapets do not resemble any known state plans from the period. Indeed, when the county first began to build concrete bridges in 1910, it initially adopted, but then rejected, the state's concrete plans. Early in 1913, the board once again rejected state concrete plans, declaring "that they were not in harmony with the board's ideas as to what they want." Webster County later that year finally did embrace the state standards, although no other, later arches remain today.

The two Willow Creek Bridges appear to have been the first major concrete vehicular bridges built in Webster County. They are significant for their representation of Webster County's earliest experimentation with concrete construction. Although badly weathered, this span is unaltered and possesses a high degree of physical integrity.

NAME(S) OF STRUCTURE
Willow Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C009123540; Proceedings of the Webster County Commissioners, located in Webster County Courthouse, Red Cloud, Nebraska, see the following entries in Volume D: 7 December 1909 (p. 351), 24 March 1910 (p. 381), 15 April 1910 (p. 385), 22 August 1911 (p. 483), 26 February 1913 (p. 601), 5 March 1913 (p. 601), 12 August 1913 (p. 633); Ninth Biennial Report of the State Board of Irrigation, Highways, and Drainage, 1910-1912, see included concrete bridge plans; field inspection by Jeffrey A. Hess, 22 July 1989

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Red Cloud Bridge
NDOR: S281 00423

WEBS03

DATE(S) OF CONSTRUCTION
1935

LOCATION
State Highway 281 over Republican River; S11/12, T1N, R11W
2 miles south of Red Cloud; Webster County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP eligible (score: 69)

CONDITION
good

OWNER
State of Nebraska

span number: 3
span length: 200.0'
total length: 644.0'
roadway wdt.: 23.8'

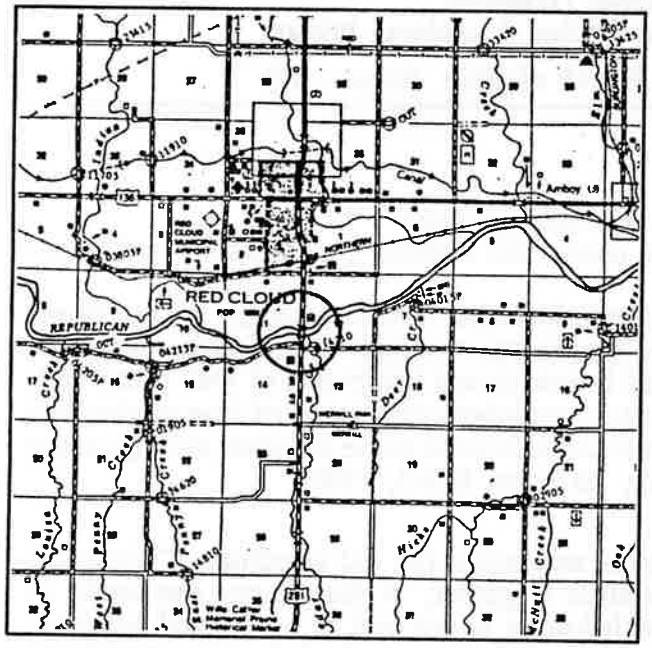
superstructure: steel, rigid-connected continuous Warren pony/through truss
substructure: concrete abutments and wingwalls; concrete piers with slanted cutwaters on both faces
floor/decking: concrete deck over I-beam stringers
other features: upper chord: back-to-back channels with cover plate and double lacing; lower chord: face-to-face channels with top and bottom double lacing; vertical: wide flange; diagonal: wide flange; sway bracing at piers: overhead lateral struts composed of web plate with angle stiffeners; top lateral at piers: cross-braced members composed of four angles tied with lacing; floor beam: I-beam; bottom lateral: cross-braced angle sections; railing: angle rails on angle posts; capacity plate: **Capacity, 20 Tons, E 3-1, 1935**

The Nebraska Highway Department designed the Red Cloud Bridge in 1935, after spring floods weakened the old structure. "While the floods of May and June 1935, did not wash the old Red Cloud bridge away," explained the state engineer, "it did change the banks of the river to such an extent that it was deemed most expedient to construct a new bridge with longer spans and at a changed location, so as to straighten the alignment of U.S. Highway No. 281. The old bridge had a narrow 16-foot roadway, which is now considered inadequate for a highway of such importance." The fact that the entire project was to be paid for with federal emergency flood relief funds also undoubtedly encouraged the state to build a new bridge. Although the highway department generally constructed simple truss spans, it instead delineated a continuous truss for the Red Cloud Bridge. The channel spans are comprised of three continuous pony trusses - a 200-foot central span and 160-foot ends - flanked by deck girder approaches. To provide sway bracing, overhead lateral struts connect the upper chords of both webs at the bridge piers. The four main piers are constructed of concrete with up- and downstream cutwaters. The piers rest on concrete-filled tubes driven to bedrock. The approach span abutments consist of steel piles encased in concrete, with flared, sloped wingwalls. Highway department engineers took great pains to ensure that the bridge was seated properly to avoid undue stresses at the bearing points, weighing each truss with hydraulic jacks before the concrete deck was poured. The Omaha Structural Steel Works served as contractor and fabricator for the project, and completed the structure for $83,087.95. The bridge has carried relatively heavy vehicular traffic since, in essentially unaltered condition.

The Red Cloud Bridge is historically significant as a major highway crossing of the Republican River in southern Nebraska. The structure is technologically significant as a rare experimental design by the state highway department. Representing a highly unusual foray into continuous truss engineering, the Red Cloud Bridge is unique in Nebraska and is one of the state's most important vehicular spans.

NAME(S) OF STRUCTURE
Red Cloud Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number S281 00423; **Twenty-First Biennial Report of the Department of Roads and Irrigation**, 1935-1936, pp. 49, 74-75, 120, 125-127, 131, 140; State of Nebraska, Department of Roads and Irrigation, Bureau of Roads and Bridges, "640' Multiple Span Bridge," 4 October 1935, plan number ER-3-1, located in Bridge Division, Nebraska Department of Roads, Lincoln, Nebraska; field inspection by Jeffrey A. Hess, 22 July 1989

INVENTORIED BY
Demian Hess

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Big Blue River Bridge
NDOR: C009300405

YORK01

DATE(S) OF CONSTRUCTION
1910

LOCATION
county road over the Big Blue River; S4/9, T12N, R4W
9.4 miles west of Benedict; York County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 35)

CONDITION
fair

OWNER
York County

span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt pony truss
span length:	45.0'	substructure:	concrete abutments and wingwalls
total length:	45.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	14.9'	other features:	upper chord: 2 channels with cover plate and lacing; bottom chord: 2 punched rectangular eyebars; vertical: 4 angles with lacing; diagonal: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; floor beam: I-beam, U-bolted to lower chord pin at vertical; guardrail: 2 angles; endpost-mounted builder's plate: **Built by the Western Bridge & Construction Co, Omaha. Neb.**

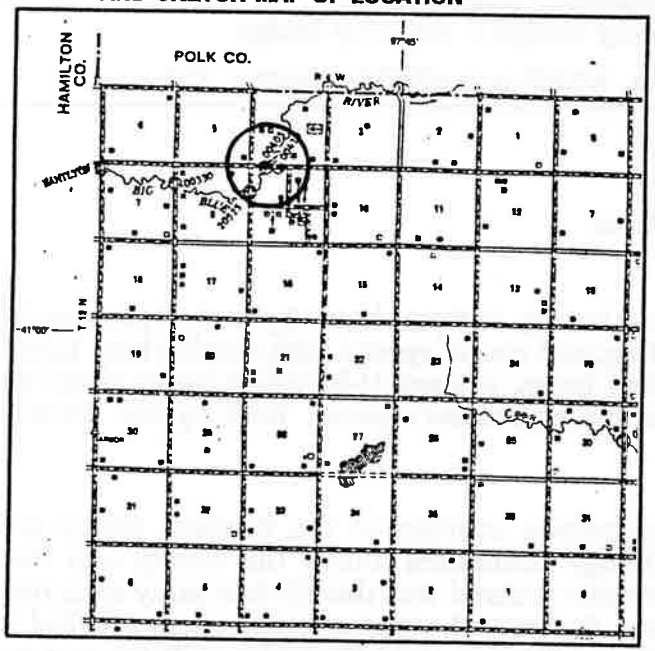
In January 1910 the York County Board of Supervisors awarded an annual bridge construction contract to the Western Bridge and Construction Company, as it had for the previous three years. That June the board's bridge committee toured the county and then contracted for several small-scale steel structures. One of the smaller trusses that the committee ordered was this 45-foot pony span over the Big Blue River in Arborville Township, in the county's northwest corner. Using its own design and standard steel sections rolled in Pittsburgh by the Cambria Steel Company, the Omaha-based bridge company completed the truss by mid-November. Total cost for fabrication and erection: $1221. The Big Blue River Bridge has carried county road traffic since, in essentially unaltered condition.

Marketed extensively by virtually all of the in-state bridge contractors and promoted in the form of standardized designs by the Nebraska State Engineer's office, the pinned Pratt pony truss was used widely by Nebraska's counties to carry roads over the state's myriad small streams. The Western Bridge and Construction Company of Omaha was one of Nebraska's two largest purveyors of steel spans (the Standard Bridge Company formed its chief competition). Western alone erected thousands of such short-span trusses throughout the state in the first two decades of the 20th century. The Big Blue River Bridge typifies this construction trend. A 45-foot Pratt truss erected in 1910, it fits well within the milieu of Nebraska roadway bridge construction.

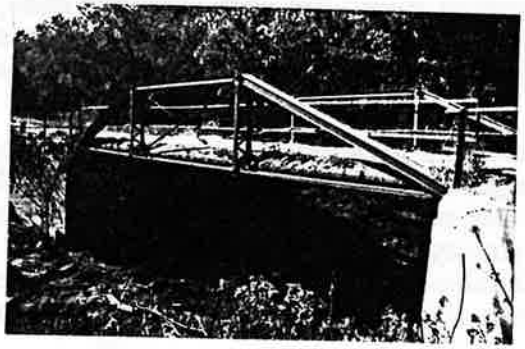
NAME(S) OF STRUCTURE

Big Blue River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C009300405; York County Supervisors' Record, Book 5: 11 January 1910 (page 259), 17 June 1910 (page 307), 5 January 1911 (page 382), located at York County Courthouse, York, Nebraska; field inspection by Clayton Fraser and Paula Sutton, 26 September 1989.

INVENTORIED BY

Clayton B. Fraser and Paula E.M. Sutton

AFFILIATION

Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE

15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Bridge
NDOR: C009300410

YORK02

DATE(S) OF CONSTRUCTION
1918

LOCATION
county road over intermittent stream; S4/9, T12N, R4W
9.3 miles west of Benedict; York County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 29)

CONDITION
good

OWNER
York County

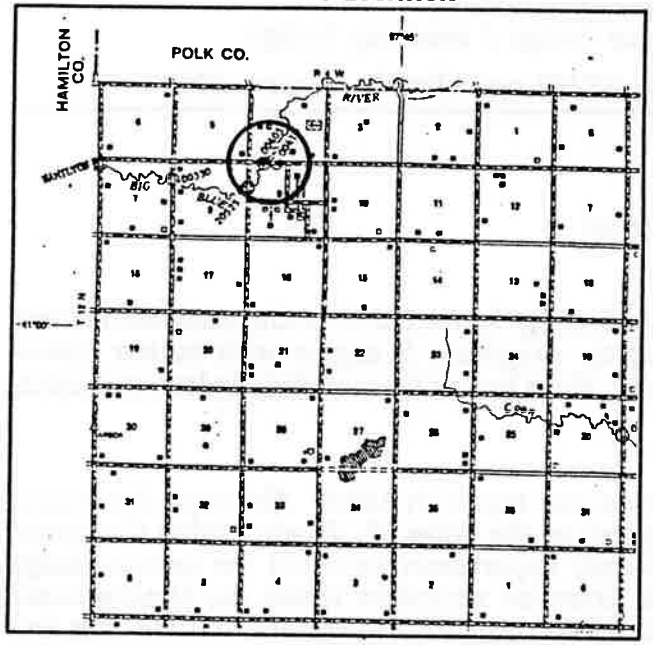
span number:	1	superstructure:	steel, 3-panel, rigid-connected Pratt pony truss
span length:	35.0'	substructure:	concrete abutments and wingwalls
total length:	36.0'	floor/decking:	concrete with curbing over steel stringers
roadway wdt.:	15.8'	other features:	upper chord: 2 channels with cover plates and lacing; lower chord: 2 channels with batten plates; vertical: 4 angles with batten plates; diagonal: 2 angles with batten plates; lateral bracing: round bar with threaded ends; floor beam: I-beam, field bolted to vertical below lower chord; guardrail: 2 angles

York County began contracting annually on the basis of unit-price bids for bridge construction and repair in 1888. Although the county occasionally purchased iron or steel structures from firms such as the Canton Bridge Company or the John W. Towle Bridge Company, most of the bridges built before 1907 consisted of timber piles and decks. In 1907 the county supervisors awarded the annual bridge contract for the first time to the Western Bridge and Construction Company, beginning an extended period in which the Omaha-based contractor built virtually all of York County's spans. One of the small-scale trusses erected by Western for the county in 1918 was this 35-foot riveted Pratt pony over an intermittent tributary to the Big Blue River in Arborville Township. Using steel components rolled by Lackawanna, the firm completed the bridge by September of that year for $3914. The bridge has functioned since on this county road in unaltered condition.

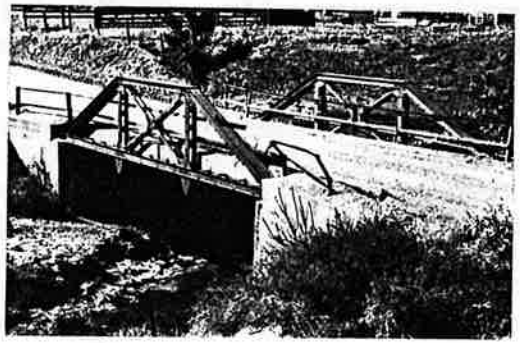
This bridge typifies short-span truss construction in Nebraska in the 1910s. Fabricated from a state standard design and built by one of the state's most prolific bridge erectors during a time of intense bridge activity, it fits well within the mainstream of technological trends for the period. Lacking any major historical significance in its present location and typifying an exceedingly common structural type in Nebraska, this bridge lacks an appreciable level of significance.

NAME(S) OF STRUCTURE
Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C009300410; York County Supervisors' Record, Book 8: 8 January 1918 (page 197), 14 June 1918 (page 218), 25 March 1919 (page 249), located at York County Courthouse, York, Nebraska; field inspection by Clayton Fraser and Paula Sutton, 26 September 1989.

INVENTORIED BY
Clayton B. Fraser and Paula E.M. Sutton

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Beaver Creek Bridge
NDOR: C009300710

YORK03

DATE(S) OF CONSTRUCTION
ca.1915

LOCATION
county road over Beaver Creek; S3/4, T10N, R4W
2 miles southwest of Bradshaw; York County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 29)

CONDITION
good

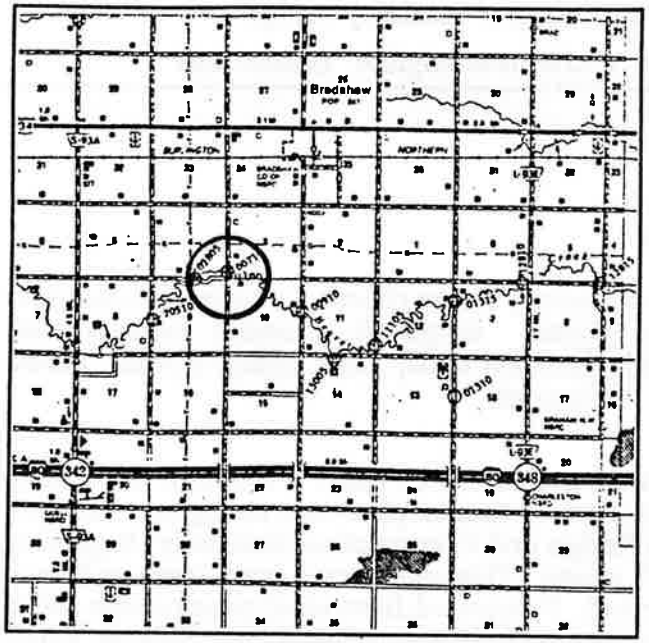
OWNER
York County

span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt pony truss
span length:	40.0'	substructure:	concrete abutments with timber wingwalls
total length:	41.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	15.8'	other features:	upper chord: 2 channels with cover plates and lacing; lower chord: 2 punched rectangular eyebars; vertical: 4 angles with batten plates; diagonal: 2 round eyebars with turnbuckles; lateral bracing: round bar with threaded ends; floor beam: I-beam, bolted to vertical above lower chord; guardrail: 2 channels

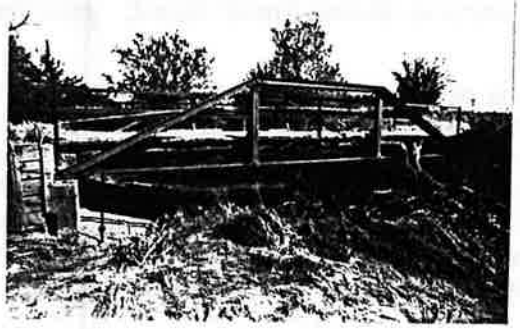
York County began contracting annually on the basis of unit-price bids for bridge construction and repair in 1888. Although the county occasionally purchased iron or steel structures, most of the bridges built before 1907 consisted of timber piles and stringers. In 1907 the county supervisors awarded the annual bridge contract for the first time to the Western Bridge and Construction Company, beginning an extended period in which the Omaha-based contractor built virtually all of York County's spans. This small-scale pony truss in Brown Township southwest of Bradshaw is one of the steel spans erected by Western during this period. Fabricated from steel components rolled by the Cambria Steel Company in Pittsburgh using a standard design by Nebraska State Engineer, it was erected over Beaver Creek ca.1915. The Beaver Creek Bridge remains essentially unaltered, as a typically configured examples of an exceedingly common vehicular truss type.

NAME(S) OF STRUCTURE
Beaver Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C009300710; Proceedings of the York County Board of Supervisors, 12 January 1915, located at York County Courthouse, York, Nebraska; field inspection by Clayton Fraser, 26 September 1989.

INVENTORIED BY
Clayton B. Fraser and Paula E.M. Sutton

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Lincoln Creek Bridge
NDOR: C009301810

YORK04

DATE(S) OF CONSTRUCTION
1918

LOCATION
county road over Lincoln Creek; S9/16, T11N, R3W
5.8 miles northwest of York; York County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 33)

CONDITION
fair

OWNER
York County

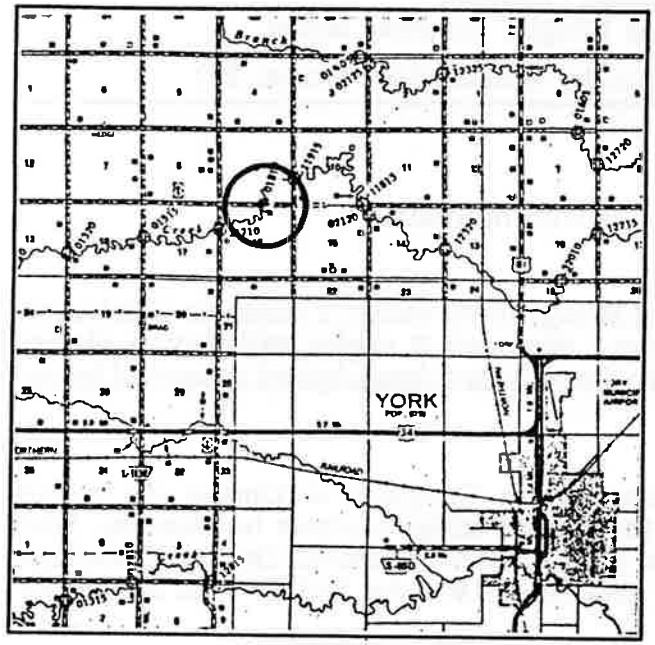
span number:	1	superstructure:	steel, 3-panel, rigid-connected Pratt pony truss with outriders
span length:	40.0'	substructure:	concrete abutments and wingwalls
total length:	41.0'	floor/decking:	concrete deck over steel stringers
roadway wdt.:	15.8'	other features:	upper chord: 2 channels with cover plates and lacing; lower chord: 2 channels with batten plates; vertical: 4 angles with batten plates; diagonal: 2 angles with batten plates; lateral bracing: round bar with threaded ends; floor beam: I-beam bolted to vertical below lower chord; guardrail: 2 angles

Beginning in 1907, York County contracted annually with the Western Bridge and Construction Company of Omaha for bridge construction and repair. In January 1918 the county board of supervisors again awarded the annual bridge contract to Western. One of the small-scale steel structures purchased that year by the county was this 40-foot riveted pony truss over Lincoln Creek in Lockridge Township. Using steel components rolled by Bethlehem, the firm completed the bridge by September 1918 for $4345. The bridge has functioned since on this county road in unaltered condition.

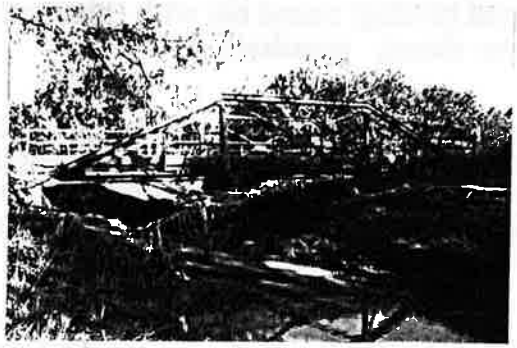
The Lincoln Creek Bridge is one of thousands of such small-scale, pinned Pratt pony trusses erected across Nebraska in the 1910s. Located on a secondary county road, it has played only a marginal role in the development of central Nebraska transportation. With its modest dimensions and standard detailing, the Lincoln Creek Bridge is a typical, undistinguished example of an exceedingly common structural type in Nebraska.

NAME(S) OF STRUCTURE
Lincoln Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C009301810; Proceedings of the York County Board of Supervisor, 8 January 1918, 14 June 1918, 24 September 1918, 25 March 1919, located at York County Courthouse, York, Nebraska; field inspection by Clayton Fraser, 26 September 1989.

INVENTORIED BY
Clayton B. Fraser and Paula E.M. Sutton

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Beaver Creek Bridge
NDOR: C009302805

YORK05

DATE(S) OF CONSTRUCTION
1910

LOCATION
county road over Beaver Creek; S4/9, T10N, R4W
9.5 miles west of York; York County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 33)

CONDITION
fair

OWNER
York County

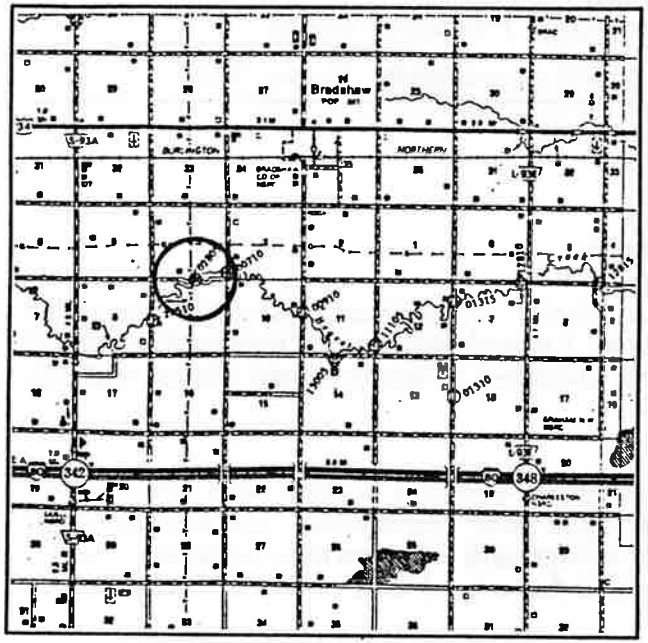
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt pony truss
span length:	45.0'	substructure:	steel pile bent abutments with timber wingwalls
total length:	45.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	14.2'	other features:	upper chord: 2 channels with cover and batten plates; lower chord: 2 looped rectangular eyebars; vertical: 4 angles with lacing; diagonal: 1 round eyebar with turnbuckle; lateral bracing: round eyebars; floor beam: I-beam, U-bolted to lower chord pin at vertical; guardrail: 2 angles

Located 9-1/2 miles west of York in rural Brown Township, this small-scale bridge carries a gravel-surfaced county road over Beaver Creek. The structure consists of a single 45-foot pinned Pratt pony truss, supported by steel pile bent abutments. The Beaver Creek Bridge was erected in 1910 as part of York County's annual bridge contract with the Western Bridge and Construction Company. Using steel rolled by Cambria, the Omaha-based bridge company completed the truss by mid-November for a total cost of $1117. The Beaver Creek Bridge has carried county road traffic since, in relatively unaltered condition.

This bridge typifies short-span truss construction in Nebraska in the 1910s. Fabricated and built by one of the state's most prolific bridge erectors during a time of intense bridge activity, the Beaver Creek Bridge fits well within the mainstream of technological trends for the period. Lacking any major historical significance in its present location and typifying an exceedingly common structural type in Nebraska, this bridge lacks an appreciable level of significance.

NAME(S) OF STRUCTURE
Beaver Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C009302805; York County Supervisors' Record: 11 January 1910, 17 June 1910, 15 November 1910, 5 January 1911, located at York County Courthouse, York, Nebraska; field inspection by Clayton Fraser, 26 September 1989.

INVENTORIED BY
Clayton B. Fraser and Paula E.M. Sutton

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Big Blue River Bridge
NDOR: C009304110

YORK06

DATE(S) OF CONSTRUCTION
1910

LOCATION
county road over West Fork of the Big Blue River; S8/9, T9N, R1W
7.9 miles east of McCool Junction; York County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 33)

CONDITION
good

OWNER
York County

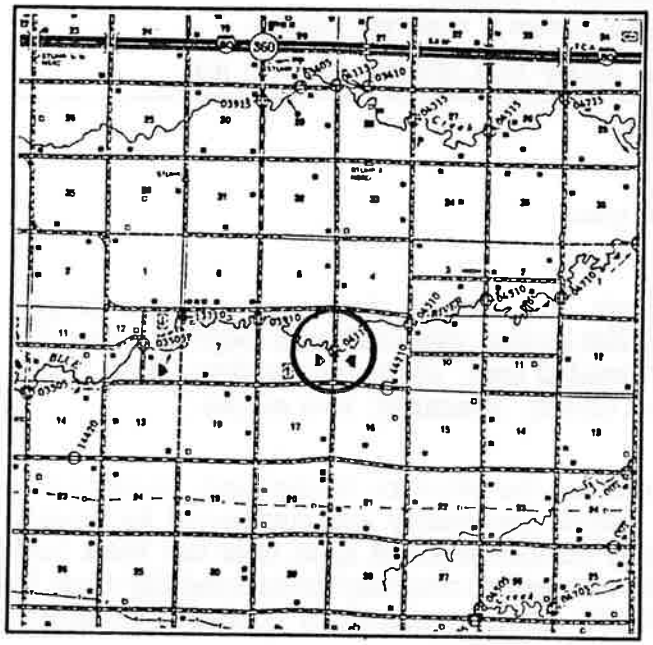
span number:	1	superstructure:	steel, 5-panel, pin-connected Pratt through truss
span length:	80.0'	substructure:	concrete abutments and wingwalls
total length:	80.0'	floor/decking:	timber decking over steel stringers
roadway wdt.:	15.8'	other features:	upper chord: two channels with cover plate and lacing; lower chord: two looped rectangular eyebars; vertical: two channels with lacing; diagonal: two looped rectangular eyebars; lateral bracing: round bar with threaded end; strut: two angles; floor beam: I-beam, field bolted to vertical below lower chord; guardrail: two angles

In January 1910 the York County Board of Supervisors awarded an annual bridge contract to the Western Bridge and Construction Company, as it had for the previous three years. That June the board's bridge committee toured the county and contracted for several small-scale steel structures. The longest truss that the committee ordered that year was this 80-foot through span over the West Fork of the Big Blue River in West Blue Township. Using steel rolled by Carnegie, the Omaha-based bridge company completed the truss by mid-November for the total cost of $2253. The Big Blue River Bridge has carried vehicular traffic since, in essentially unaltered condition.

In Nebraska, the pinned Pratt through truss was the bridge of choice for short- and medium-span applications in the early 1900s. Most of the structures erected during this period were based on standard plans developed either by the state engineer or by the individual bridge companies. As a result, hundreds of Pratts were built across the state, all essentially identical, and today the Pratt truss constitutes the most populous group of through trusses. Though it retains a relatively high degree of physical integrity, the Big Blue River Bridge is unremarkable in its design, dimensions and detailing.

NAME(S) OF STRUCTURE
Big Blue River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C009304110; York County Supervisors' Record: 11 January 1910, 17 June 1910, 15 November 1910, 5 January 1911, located at York County Courthouse, York, Nebraska; field inspection by Clayton Fraser and Paula Sutton, 7 September 1989.

INVENTORIED BY
Clayton B. Fraser and Paula E.M. Sutton

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Big Blue River Bridge
NDOR: C009304915

YORK07

DATE(S) OF CONSTRUCTION
1914

LOCATION
county road over West Fork of the Big Blue River; S1/36 T9/10N R1W
13.3 miles southeast of York; York County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 34)

CONDITION
good

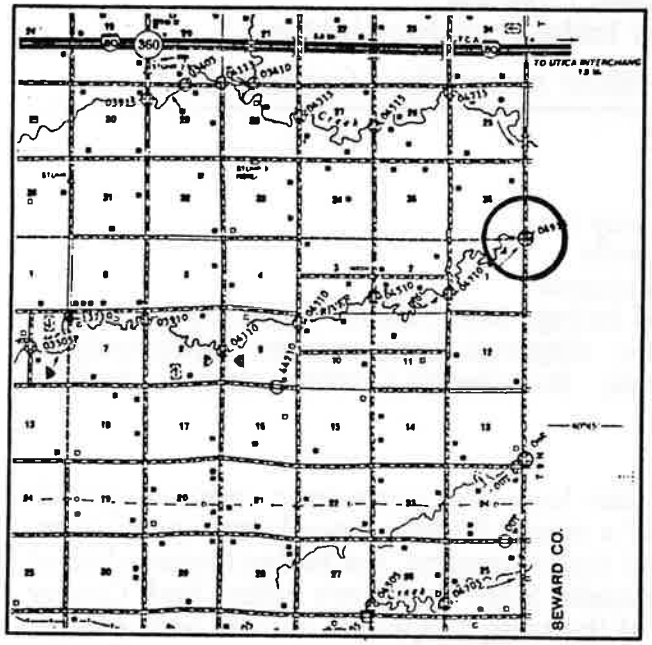
OWNER
York County

span number:	1	superstructure:	steel, 5-panel, pin- / rigid-connected Pratt pony truss
span length:	90.0'	substructure:	steel pile bent abutments with timber wingwalls
total length:	91.0'	floor/decking:	timber with replacement planks over steel stringers
roadway wdt.:	17.8'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 rectangular looped eyebars; vertical: 4 angles with batten plates; diagonal: 2 rectangular looped eyebars; lateral bracing: round bar with threaded ends; floor beam: I-beam bolted to vertical; guardrail: 2 channels

Located some 13 miles southeast of York on the line between York and Seward counties, this long-span pony truss carries a gravel-surfaced county road across the West Fork of the Big Blue River. The structure consists of a single 90-foot pinned Pratt pony truss, supported by steel pile bent abutments. Fabricated from steel components rolled by the Inland Steel Company, the bridge features bolted gusset plates at the upper chord/vertical connections, indicating its design source as the Nebraska State Engineer's office. York County records of the time do not mention this structure specifically, but based on design attributes of the truss, it appears to have been erected ca.1915, during a period in which the Western Bridge and Construction Company dominated bridge construction in the county. The Big Blue River Bridge remains in essentially unaltered condition as a typically configured example of a common structural type.

NAME(S) OF STRUCTURE
Big Blue River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C009304915; Proceeding of the York County Board of Supervisors, 13 January 1914, located at York County Courthouse, York, Nebraska; field inspection by Clayton Fraser and Paula Sutton, 7 September 1989.

INVENTORIED BY
Clayton B. Fraser and Paula E.M. Sutton

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY
Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Lincoln Creek Bridge
NDOR: C009311110

YORK08

DATE(S) OF CONSTRUCTION
1916

LOCATION
county road over Lincoln Creek; S23/24, T11N, R4W
2.5 miles northeast of Bradshaw; York County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 32)

CONDITION
good

OWNER
York County

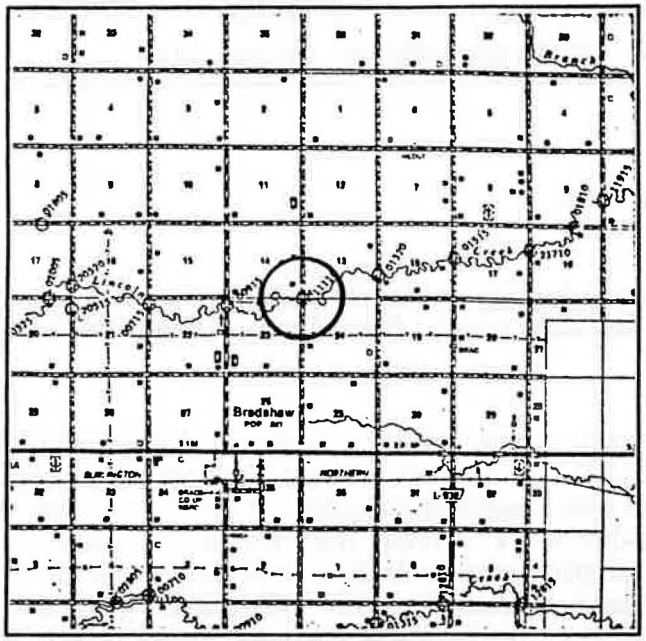
span number:	1	superstructure:	steel, 3 panel, rigid-connected Pratt pony truss
span length:	60.0'	substructure:	concrete abutments and wingwalls
total length:	61.0'	floor/decking:	concrete deck over steel stringers
roadway wdt.:	15.7'	other features:	upper chord: 2 channels with cover plates and lacing; lower chord: 2 angles with batten plates; lateral bracing: round bar with threaded ends; floor beam: I-beam bolted to vertical; guardrail: 2 channels

In January 1916, the York County Board of Supervisors awarded an annual bridge contract to the Western Bridge and Construction Company of Omaha, as it had done every year since 1907. But the supervisors soon rescinded the contract when they began to suspect that Western Bridge's unit prices were too high compared with those paid by adjacent Hall and Saunders counties. The county's bridge committee investigated the matter "to find out as much as possible about the cost of bridge work." What they found was that York County was paying as much for timber-decked trusses as Hall county was for comparable length concrete-decked structures. The bridge committee consulted with the state engineer "to ascertain if the state engineer thought the bid a reasonable one." When told by the state engineer that Western's bid compared favorably with the prices paid by other outlying counties, the York County supervisors reinstated Western's contract in February. One of the spans ordered from Western later that year was this 60-foot riveted Pratt truss over Lincoln Creek in Bradshaw Township. Using steel components rolled by the Illinois Steel Company, Western erected the bridge by September for $3509.02. The Lincoln Creek Bridge has functioned in place since, in essentially unaltered condition.

The Lincoln Creek Bridge typifies short-span truss construction in Nebraska in the 1910s. Fabricated and built by one of the state's most prolific bridge erectors during a time of intense bridge activity, it fits well within the mainstream of technological trends for the period. The difficulties with Western Bridge were also typical, as bid rigging seemed to be endemic in Nebraska bridge construction during the 1910s. Lacking any major historical significance in its present location and typifying an exceedingly common structural type in Nebraska, this bridge lacks an appreciable level of significance.

NAME(S) OF STRUCTURE
Lincoln Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C009311110; Proceedings of the York County Board of Supervisors, 9 January 1918, 14 June 1918, 27 November 1917; field inspection by Clayton Fraser, 26 September 1989.

INVENTORIED BY
Clayton B. Fraser and Paula E.M. Sutton

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Lincoln Creek Bridge
NDOR: C009311813

YORK09

DATE(S) OF CONSTRUCTION
1917

LOCATION
county road over Lincoln Creek; S10/15, T11N, R3W
5.0 miles northwest of York; York County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 33)

CONDITION
good

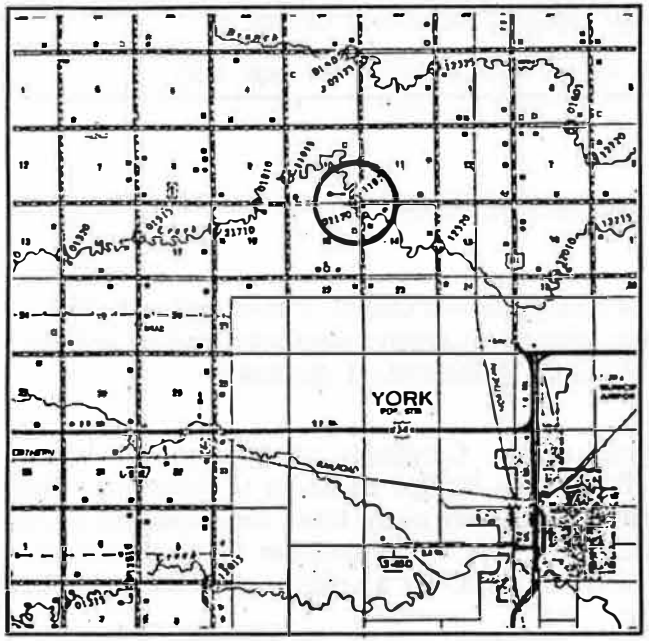
OWNER
York County

span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt pony truss with outriders
span length:	40.0'	substructure:	concrete abutments and wingwalls
total length:	41.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	16.0'	other features:	upper chord: 2 channels with cover plates and lacing; lower chord: 2 punched rectangular eyebars; vertical: 4 angles with batten plates; diagonal: square eyebars; lateral bracing: round bar; floor beam: I-beam bolted to vertical: guardrail: 2 channels

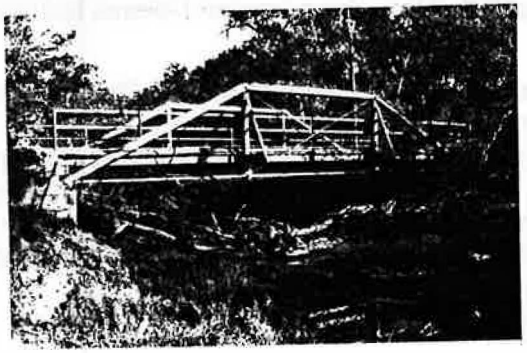
Beginning in 1907, York County contracted annually with the Western Bridge and Construction Company of Omaha for bridge construction and repair. In January 1917 the county board of supervisors again awarded the annual bridge contract to Western. One of the small-scale steel structures purchased that year by the county was this 40-foot pin-connected Pratt pony truss over Lincoln Creek in Lockridge Township. Using steel components rolled by Lackawanna, the firm completed the bridge by September of that year at a cost of $2425.51. Since its construction, the Lincoln Creek Bridge has served to carry vehicular traffic on a county road in unaltered condition. It is relatively undistinguished as a typical example of a common structural type.

NAME(S) OF STRUCTURE
Lincoln Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C009311813; Proceedings of the York County Board of Supervisors, 9 January 1918, 14 June 1918, 27 November 1917; field inspection by Clayton Fraser, 26 September 1989.

INVENTORIED BY
Clayton B. Fraser and Paula E.M. Sutton

AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Big Blue River Bridge
NDOR: C009313710

YORK10

DATE(S) OF CONSTRUCTION
1925

LOCATION
county road over West Fork of Big Blue River; S7/12, T9N, R2W
6.2 miles northeast of McCool Junction; York County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 37)

CONDITION
good

OWNER
York County

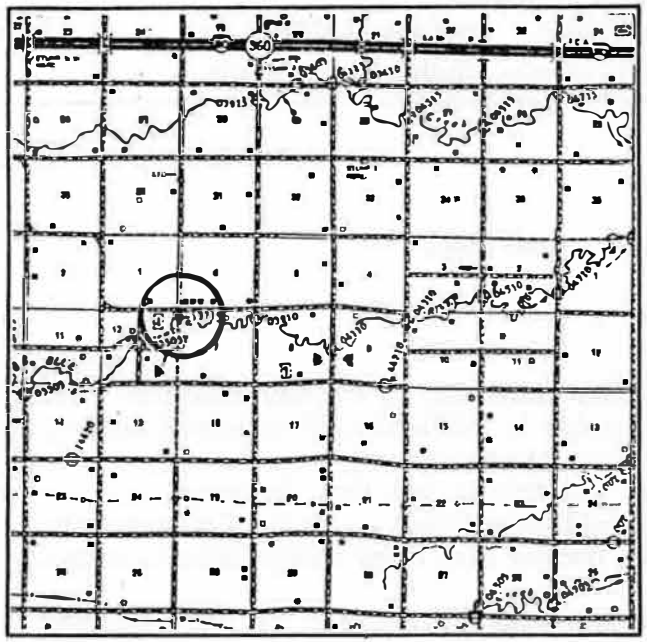
span number:	4	superstructure:	concrete slab
span length:	22.0'	substructure:	concrete abutments and wingwalls with solid concrete piers
total length:	90.0'	floor/decking:	concrete deck
roadway wdt.:	17.5'	other features:	guardrail: concrete post and rail with recessed panels in post

This bridge carries an unpaved road over the West Fork of the Big Blue River about 6.2 miles northeast of McCool Junction. The structure is a four-span concrete slab, supported by concrete abutments and piers. The bridge is distinguished architecturally by ornamental post-and-rail guardrails with a recessed panel in each post. The date of construction, 1925, is stamped in the concrete on the sidewall above the second pier. County supervisors' records do not specifically mention this bridge, but they do reveal that the Western Bridge and Construction Company of Omaha received York County's annual bridge building contract in 1925. Consequently, this bridge was probably built by Western. Other than minor collision damage to the guardrails, the Big Blue River Bridge remains intact.

Historically noteworthy for its excellent state of preservation and architecturally noteworthy for its guardrail treatment, the Big Blue River Bridge is otherwise a typical example of concrete slab construction in the 1920s.

NAME(S) OF STRUCTURE
Big Blue River Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C009313710; Proceedings of the York County Board of Supervisors, 14 January 1925, located at York County Courthouse, York, Nebraska; field inspection by Clayton Fraser and Paula Sutton, 7 September 1989.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser and Paula E.M. Sutton	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Beaver Creek Bridge
NDOR: C009314115

YORK11

DATE(S) OF CONSTRUCTION
1915

LOCATION
county road over Beaver Creek; S16/17, T10N, R1W
8.2 miles southeast of York; York County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 36)

CONDITION
fair

OWNER
York County

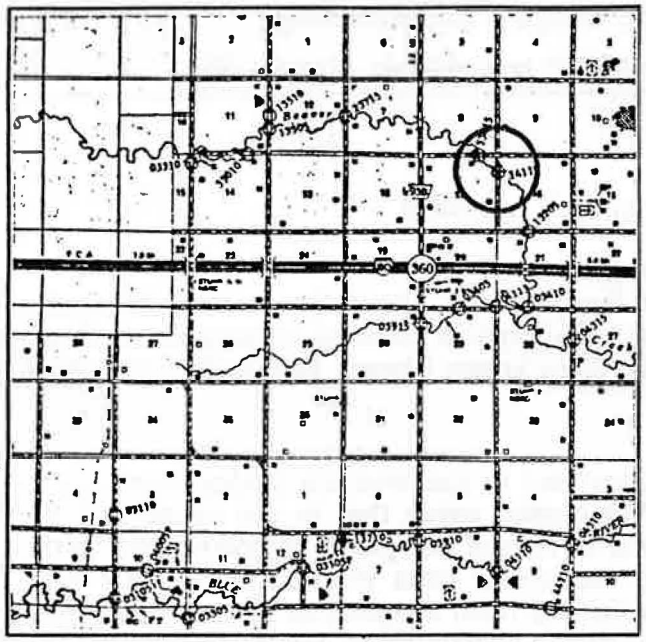
span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt pony truss with outriders
span length:	70.0'	substructure:	concrete abutments and wingwalls
total length:	72.0'	floor/decking:	earth-covered timber decking over steel stringers
roadway wdt.:	15.7'	other features:	upper chord: 2 channels with cover plate and lacing; lower chord: 2 punched rectangular eyebars; vertical: 4 angles with batten plates; diagonal: 2 punched rectangular eyebars; lateral bracing: round bar with threaded ends; floor beam: I-beam, field bolted to vertical below lower chord; guardrail: 2 channels

Shortly after the York County Board of Supervisors awarded an annual bridge construction contract to the Western Bridge Company in January 1915, F.J. Birss, president of the Omaha-based contractor wrote to the county: "We hereby agree that in the event that the legislature, now in session, passes any law providing for lighter and cheaper bridges: we agree to reduce our prices to correspond to the new law." This may have reassured the county officials that the spans they had purchased exclusively from Western since 1907 were structurally sufficient and probably exceeded the state standards. But the truth is that Western had been caught just three years earlier cheating on the construction of steel trusses in Clay County (see **CLAY07** for details). York County continued to contract with Western solely for its bridges through the 1920s, despite doubts the next year about the company's pricing policy (see **YORK08** for details). In 1915 Western Bridge erected at least three steel pony trusses for the county. Built for a cost of $3,584.57, this 70-foot pin-connected Pratt pony was largest of these. The structure is located some eight miles southeast of York in Beaver Township. It retains a high degree of physical integrity, as it continues to carry vehicular traffic across Beaver Creek in an unaltered condition.

The Beaver Creek Bridge typifies short-span truss construction in Nebraska in the 1910s. Fabricated and built by one of the state's most prolific bridge erectors during a time of intense bridge activity, it fits well within the mainstream of technological trends for the period. The difficulties with Western Bridge were also typical, as bid rigging and scrimping on specifications seemed to be endemic in Nebraska bridge construction during the 1910s. Lacking any major historical significance in its present location and typifying an exceedingly common structural type in Nebraska, this bridge lacks an appreciable level of significance.

NAME(S) OF STRUCTURE
Beaver Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C009314115; Proceedings of the York County Board of Supervisors, 12 January 1915, 17 November 1915, 5 January 1916; field inspection by Clayton Fraser, 26 September 1989.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser and Paula E.M. Sutton	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Lincoln Creek Bridge
NDOR: C009321710

YORK12

DATE(S) OF CONSTRUCTION
1915

LOCATION
county road over Lincoln Creek; S16/17, T11N, R3W
4.9 miles northeast of Bradshaw; York County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 33)

CONDITION
good

OWNER
York County

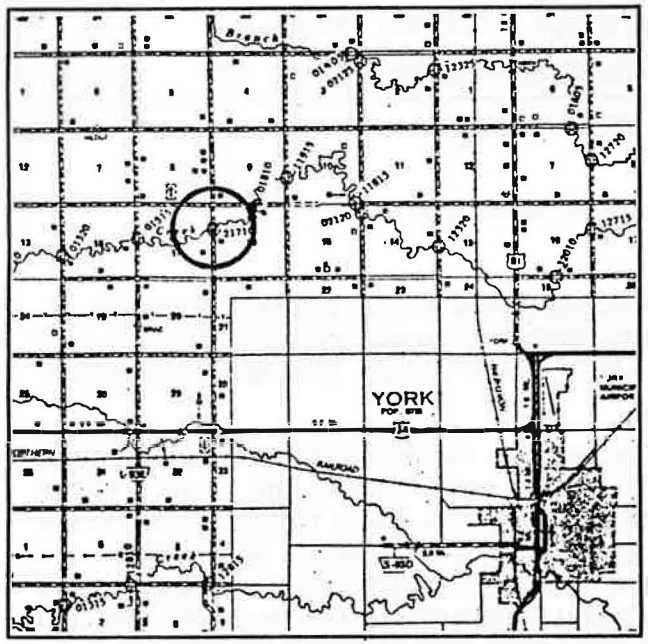
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt pony truss with outriders
span length:	50.0'	substructure:	concrete abutments and wingwalls
total length:	51.0'	floor/decking:	timber decking over steel stringers
roadway wdt.:	15.8'	other features:	upper chord: 2 channels with cover plates and lacing; lower chord; 2 punched rectangular eyebars; vertical: 4 angles with batten plates; diagonal: round eyebars with threaded ends; floor beam: I-beam bolted to vertical above lower chord; guardrail: 2 channels

Shortly after the York County Board of Supervisors awarded an annual bridge construction contract to the Western Bridge Company in January 1915, F.J. Birss, president of the Omaha-based contractor wrote to the county: "We hereby agree that in the event that the legislature, now in session, passes any law providing for lighter and cheaper bridges: we agree to reduce our prices to correspond to the new law." This may have reassured the county officials that the spans they had purchased exclusively from Western since 1907 were structurally sufficient and probably exceeded the state standards. But the truth is that Western had been caught just three years earlier cheating on the construction of steel trusses in Clay County (see CLAY07 for details). York County continued to contract with Western solely for its bridges through the 1920s, despite doubts the next year about the company's pricing policy (see YORK08 for details). One of the steel trusses that the county ordered from Western in 1915 was this 50-foot Pratt pony over Lincoln Creek in Lockridge Township, 4.9 miles northeast of Bradshaw. Using steel fabricated by the Illinois Steel Company of Chicago, the contractor completed the truss by the end of the year for a cost of $2,893.67. The Lincoln Creek Bridge continues to serve its original function of carrying vehicular traffic along an unpaved county road.

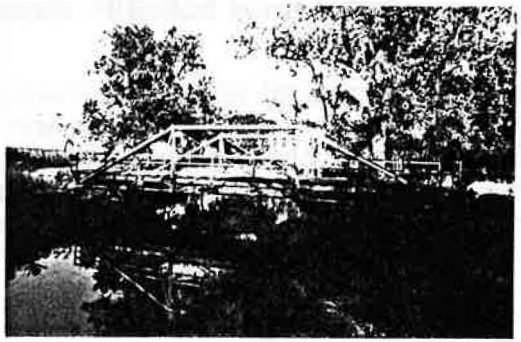
The Lincoln Creek Bridge typifies short-span truss construction in Nebraska in the 1910s. Fabricated and built by one of the state's most prolific bridge erectors during a time of intense bridge activity, it fits well within the mainstream of technological trends for the period. The difficulties with Western Bridge were also typical, as bid rigging and scrimping on specifications seemed to be endemic in Nebraska bridge construction during the 1910s. Lacking any major historical significance in its present location and typifying an exceedingly common structural type in Nebraska, this bridge lacks an appreciable level of significance.

NAME(S) OF STRUCTURE
Lincoln Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP



SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C009321710; Proceedings of the York County Board of Supervisors, 5 January 1916, 9 February 1916, 2 January 1917, located at York County Courthouse, York, Nebraska; field inspection by Clayton Fraser, 26 September 1989.

INVENTORIED BY
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AFFILIATION
Fraserdesign, Loveland CO
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Beaver Creek Bridge
NDOR: C009322905

YORK13

DATE(S) OF CONSTRUCTION
1916

LOCATION
county road over Beaver Creek; S8/9, T10N, R2W
2.1 miles southeast of York; York County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 33)

CONDITION
good

OWNER
York County

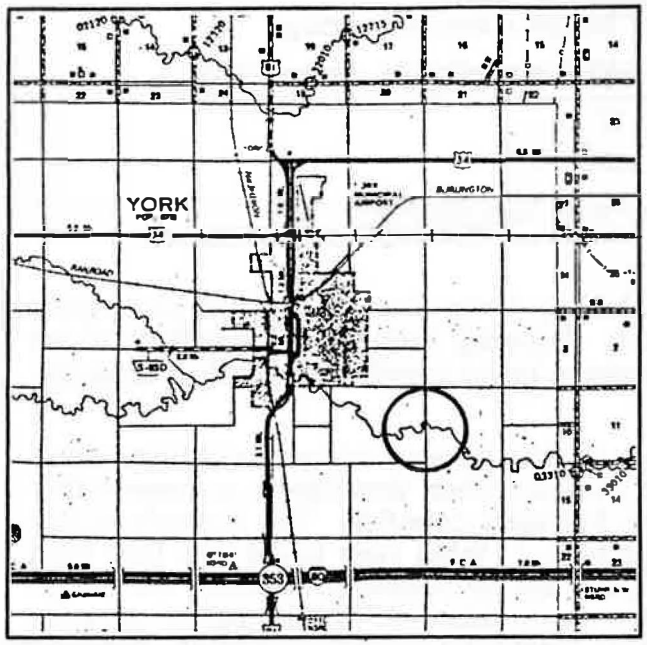
span number:	1	superstructure:	steel, 3-panel, pin-connected Pratt pony truss with outriders
span length:	45.0'	substructure:	concrete abutments and wingwalls
total length:	47.0'	floor/decking:	timber deck over steel stringers
roadway wdt.:	15.8'	other features:	upper chord: 2 channels with cover plates and lacing; lower chord; 2 punched rectangular eyebars; vertical: 4 angles with batten plates; diagonal: round eyebars with threaded ends; floor beam: I-beam bolted to vertical above lower chord; guardrail: 2 channels

In January 1916, the York County Board of Supervisors awarded an annual bridge contract to the Western Bridge and Construction Company of Omaha, as they had done every year since 1907. But they soon rescinded the contract when they began to suspect that Western Bridge's unit prices were too high compared with those paid by adjacent Hall and Saunders counties. The county's bridge committee investigated the matter "to find out as much as possible about the cost of bridge work." What they found was that York County was paying as much for timber-decked trusses as Hall county was for comparable length concrete-decked structures. The bridge committee consulted with the state engineer "to ascertain if the state engineer thought the bid a reasonable one." When told by the state engineer that Western's bid compared favorably with the prices paid by other outlying counties, the York County supervisors reinstated Western's contract in February. One of the spans ordered from Western later that year was this 45-foot pinned Pratt truss over Beaver Creek some two miles southeast of York in Leroy township. Using steel components rolled by the Illinois Steel Company, Western erected the bridge by September for $3200. The Beaver Creek Bridge has functioned in place since, in essentially unaltered condition.

The Beaver Creek Bridge typifies short-span truss construction in Nebraska in the 1910s. Fabricated and built by one of the state's most prolific bridge erectors during a time of intense bridge activity, it fits well within the mainstream of technological trends for the period. The difficulties with Western Bridge were also typical, as bid rigging seemed to be endemic in Nebraska bridge construction during the 1910s. Lacking any major historical significance in its present location and typifying an exceedingly common structural type in Nebraska, this bridge lacks an appreciable level of significance.

NAME(S) OF STRUCTURE
Beaver Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C009322905; Proceedings of the York County Board of Supervisors, 9 February 1916, 17 August 1916, 2 January 1917, located at York County Courthouse, York, Nebraska; field inspection by Clayton Fraser, 26 September 1989.

INVENTORIED BY	AFFILIATION	DATE
Clayton B. Fraser and Paula E.M. Sutton	Fraserdesign, Loveland CO Hess, Roise and Company, Minneapolis MN	15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
Beaver Creek Bridge
NDOR: C009333015

YORK14

DATE(S) OF CONSTRUCTION
1914-15

LOCATION
county road over Beaver Creek; S8/17, T10N, R1W
7.8 miles southwest of York; York County, Nebraska

USE (ORIGINAL / CURRENT)
roadway bridge / roadway bridge

RATING NRHP non-eligible (score: 36)

CONDITION
good

OWNER
York County

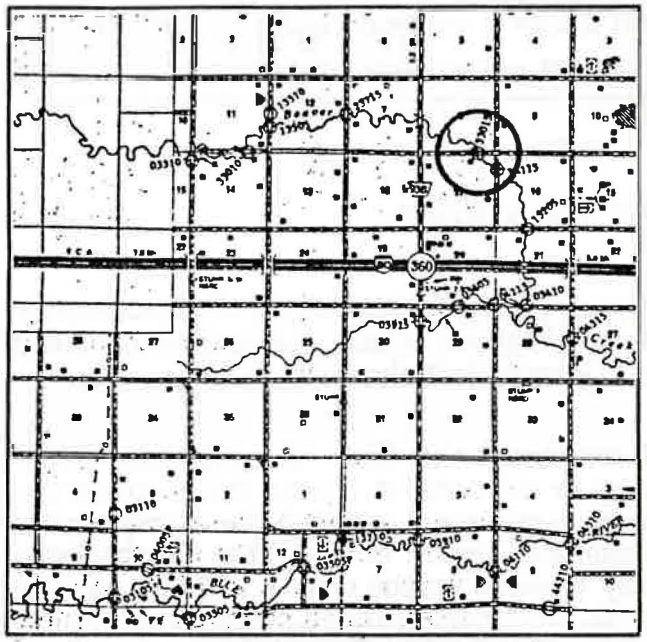
span number:	1	superstructure:	steel, 4-panel, pin-connected Pratt pony truss with outriders
span length:	70.0'	substructure:	concrete abutments and wingwalls
total length:	72.0'	floor/decking:	timber decking over steel stringers
roadway wdt.:	15.8'	other features:	upper chord: 2 channels with cover plates and lacing; lower chord: 2 punched rectangular eyebars; vertical: 4 angles with batten plates; diagonal: square eyebars; floor beam: I-beam bolted to vertical above lower chord; guardrail: 2 channels

York County began contracting annually on the basis of unit-price bids for bridge construction and repair in 1888. Although the county occasionally purchased iron or steel structures from firms such as the Canton Bridge Company or the John W. Towle Bridge Company, most of the bridges built before 1907 consisted of timber piles and decks. In 1907 the county supervisors awarded the annual bridge contract for the first time to the Western Bridge and Construction Company, beginning an extended period in which the Omaha-based contractor built virtually all of York County's spans. One of the small-scale trusses erected by Western for the county in 1914 was this 70-foot pinned Pratt pony over an Beaver Creek some eight miles southwest of York. Using steel components rolled by Lackawanna, the firm completed the bridge by March 1915 for $3377. The bridge has functioned since on this county road in unaltered condition.

Marketed extensively by virtually all of the in-state bridge contractors and promoted in the form of standardized designs by the Nebraska State Engineer's office, the pinned Pratt through truss was used widely by Nebraska's counties to carry roads over the state's myriad small streams. The Western Bridge and Construction Company of Omaha was one of Nebraska's two largest purveyors of steel spans (the Standard Bridge Company formed its chief competition). Western alone erected thousands of such short-span trusses throughout the state in the first two decades of the 20th century. The Beaver Creek Bridge typifies this construction trend. A 70-foot Pratt truss erected from a state standard design in 1914-15, it fits well within the milieu of Nebraska roadway bridge construction.

NAME(S) OF STRUCTURE
Beaver Creek Bridge

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY

SOURCES
Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number C009333015; Proceedings of the York County Board of Supervisors, 12 January 1915, 10 March 1915, 5 January 1916; field inspection by Clayton Fraser, 26 September 1989.

INVENTORIED BY
Clayton B. Fraser and Paula E.M. Sutton

AFFILIATION
Fraserdesign, Loveland CO.
Hess, Roise and Company, Minneapolis MN

DATE
15 January 1991

HABS/HAER INVENTORY

Nebraska Historic Bridge Inventory

NAME(S) OF STRUCTURE
York Subways [U.S. 81 Underpasses YORK15
NDOR: S081 06204; S081 06205; S081 06208

DATE(S) OF CONSTRUCTION
1938-39

LOCATION
U.S. Highway 81 over 14th and 15th Streets; Burlington Northern RR; York; York County, Nebraska

USE (ORIGINAL / CURRENT)
highway underpasses / highway underpasses

RATING potentially NRHP eligible (score: 47)

CONDITION
excellent

OWNER
Nebraska Department of Roads

span number:	1 (each)	superstructure:	concrete rigid frame
span length:	33.0'	substructure:	concrete abutments
total length:	34.0'	floor/decking:	asphalt (streets) or railroad tracks (railroad) over concrete deck
roadway wdt.:	30.0'	other features:	guardrails: ornamental steel on all three structures; railroad underpass: pedestrian walkway with slightly arched portals; Burlington Route stamped in concrete on arched spandrel, both sides; stamped in concrete on sidewall under bridge, **M 1939**

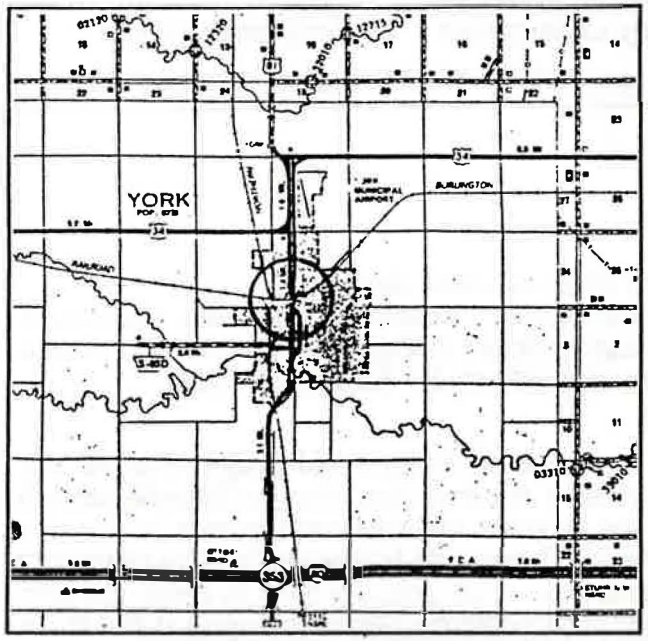
In 1938-39 Nebraska's Bureau of Roads and Bridges awarded contracts and began to oversee work on Federal Aid Project FAGM 143 H-(1) Total cost: $207,565.99. The project entailed grading, concrete work, paving, and culvert construction along a 38-mile stretch of U.S. Highway 81 between Fairmont and Osceola. Also included in the undertaking was the erection of three underpasses in the city of York, designed to carry 14th and 15th Streets, and the tracks of the Burlington Northern Railroad over the highway. Bureau engineers developed plans for the three concrete/steel structures in August 1938 and awarded a contract for their construction to Peter Kiewit's Sons a month later. Using ornamental iron railings and stairs fabricated in Omaha by the Douglas Iron works, Keiwit completed the three York Subways, as they called, the following year. Although the three structures differ in detail (the railroad underpass features paneled spandrels and ornamental iron stairway to carry pedestrian traffic below the tracks; the 14th and 15th Street underpasses featured plainly formed, slightly arched spandrels with on-graded sidewalks), the three subways are structurally similar as concrete rigid frames. The York Subways have functioned in place in unaltered condition since their completion in 1939.

The concrete rigid-frame style, developed in Westchester County, New York in the early 1920s, became especially popular for federal relief projects during the 1930s. Both picturesque and practical, the flat or elliptically arched design appealed to proponents of urban beautification. The York Subways are significant as an early Nebraska example of rigid-frame contraction. The structures are also important as an example of Depression-era federal relief funding, which not only improved the nation's infrastructure and provided jobs for the legions of unemployed, but also, for the first time, allowed the use of federal highway funds in urban areas.

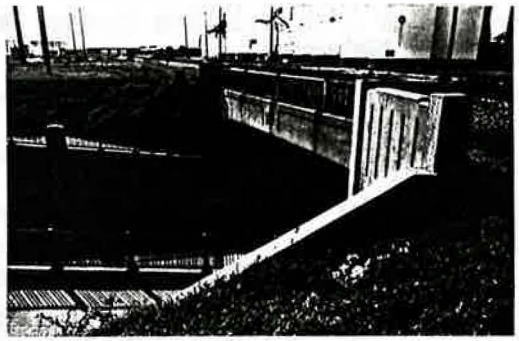
NAME(S) OF STRUCTURE

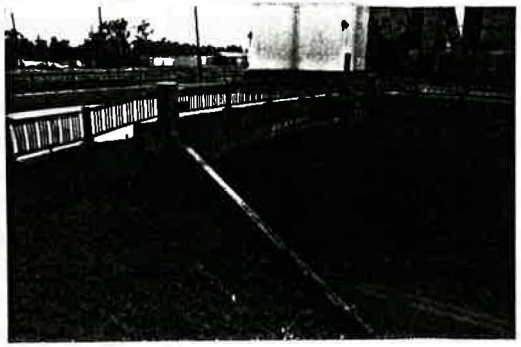
York Subways [U.S. 81 Underpasses

PHOTOS AND SKETCH MAP OF LOCATION



LOCATION MAP
TAKEN FROM NEBRASKA DEPARTMENT OF ROADS
GENERAL HIGHWAY MAP





SOURCES

Nebraska Department of Roads, Structure Inventory and Appraisal: Structure Number S081 06204, S081 06205 and S081 06208; Nebraska Department of Roads and Irrigation, Twenty-Second Biennial Report, 1937-38, pages 45, 69, 157; Construction and Shop drawings for the York Subway Project, on file with the Nebraska Department of Roads, Lincoln; field inspection by Clayton Fraser and Paula Sutton, 7 September 1989.

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